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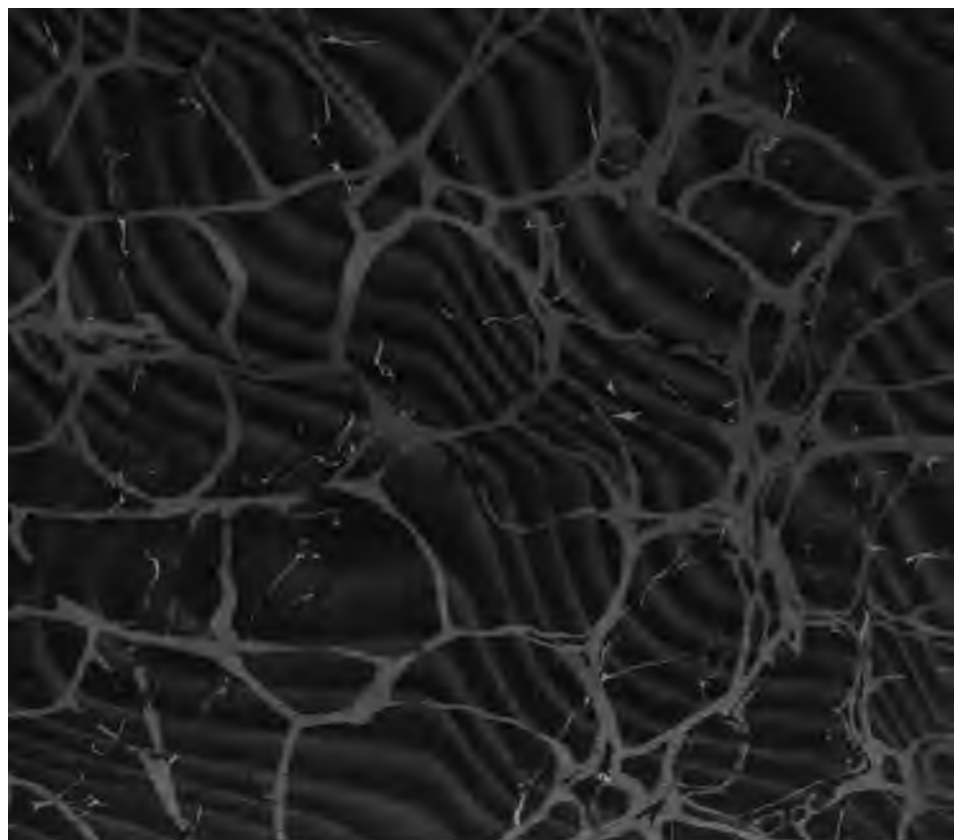
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**HOOVER INSTITUTION**  
**on War, Revolution, and Peace**

FOUNDED BY HERBERT HOOVER, 1919



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# AGRICULTURAL AND PASTORAL PROSPECTS OF SOUTH AFRICA

BY  
OWEN THOMAS  
//



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BUTLER & TANNER,  
THE SELWOOD PRINTING WORKS,  
FROME, AND LONDON.

TO  
EARL GREY  
WHOSE GENUINE INTEREST  
PRACTICAL ENTHUSIASM AND  
PUBLIC-SPIRITED EXAMPLE IN ALL  
MATTERS APPERTAINING TO THE WELFARE  
OF SOUTH AFRICA HAVE ELICITED THE ENTHUSIASTIC  
APPLAUSE OF ALL WELL-WISHERS OF THAT VAST DOMINION  
AND WHOSE ZEALOUS AND UNTIRING ENCOURAGEMENT OF  
SOUTH AFRICAN HUSBANDRY POINT TO HIM MORE PARTICU-  
LARLY AS THE INDISPENSABLE PATRON OF ANY WORK  
WHICH HAS FOR ITS OBJECT THE PROMOTION OF THE  
AGRICULTURAL AND PASTORAL INDUSTRIES OF THAT  
COUNTRY THE PRESENT WORK IS CORDIALLY  
DEDICATED  
AS A HUMBLE TESTIMONY OF THE AUTHOR'S  
SINCERE APPRECIATION AND  
ENDURING RESPECT





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ARCHIBALD CONSTABLE & CO LTD  
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MAP OF SOUTH AFRICA AT THE END.

## South Africa

**T**HE physical features of South Africa are simple in themselves. As furnishing a first clue to the interpretation of the economic history of the country, they are highly important.

**Physical,  
climatic,  
superficial,  
conditions.**

Climate, physical aspect, vital diversity of the soil, depend upon relative position, contour, and vertical relief. The same conditions also affect the country's produce. From an agricultural and pastoral point of view, the question of physical conformation mainly determines the character of South Africa.

The absence of a deeply indented coast-line deprives South Africa of that wide diversity of climate which is found in Europe and North America. Those continents are pre-eminent for length of coast-line. Europe has one mile of sea-board for every 170 sq. miles of surface: North America, one mile for every 260 sq. miles: but Africa has no more than one mile of sea-board for every 750 sq. miles of surface, the whole continent of 12,000,000 sq. miles being fringed by only 16,000 miles of coast. Africa, therefore, may be described at the outset as being a trunk without limbs, and (comparatively speaking) a maritimately inaccessible land of unnavigable rivers.

**Physical  
features.**

**Sea-board.**

Africa has an entirely individual character. It is the tropical continent. Its relative position to the rays of the sun, its physical shape and geological formation, are not identically repeated elsewhere. These individual characteristics must be taken into serious

**Individual  
character.**

## SOUTH AFRICA

consideration : because they influence and affect, not only the production of animal and vegetable life but also, the human interests of industry, enterprize, and civilization. I intend to deal with that portion of the continent of Africa which commonly is known as *South Africa*, including Natal, Cape Colony, Rhodesia, Bechuanaland, Basutoland, Transvaal, Orange River Colony, and adjacent native territories subject to the English Crown. These arbitrary divisions are but political : Nature has not distinguished them by any marked variation of their physical or geological features.

**Elevation  
above sea-  
level.**

South Africa forms three vast terraces. The lowest of these lies along the coast in a north-easterly direction from Capetown to the mouth of the River Zambesi : it varies from 10 to 60 miles in width. The second terrace lies inland of this sea-board. It rises above the first terrace in a range, known as the Drakensberg or Quathlamba Mountains, which runs parallel with the coast for hundreds of miles, and forms the only natural eastern frontier of the Orange River Colony, Transvaal, and Rhodesia. The approach from the first terrace to the second is generally steep : but the mountains here and there are pierced by passes or *kloofs*. The surface of the second terrace is much diversified by hills, valleys, plains, varying from 3,000 and 7,000 feet above sea-level to 10,500 in Basutoland and 11,000 in Natal. It gradually slopes toward the third terrace : which is a huge plateau intersected by rounded heights, lofty peaks often boldly escarped, projecting dolerite rocks, and intervening valleys. This vast table-land is situate at an altitude of 3,000 – 6,000 feet above the sea. It forms more than three-fourths of the whole area of South Africa. The highest point lies, not in the centre but, on one side. Hence, it may be said to consist of two unequal slopes. The west side forms the long slope : the counter side on the east forms the short slope. There are three kinds

## PHYSICAL AND GEOLOGICAL FEATURES

of plains :—of deposit, of denudation, of volcanic origin.

The great range of mountains, to which I have referred, constitutes an important feature because of its influence on the distribution of rain. The prevailing wind is from the east ; and its function is to bear the moisture-laden clouds from the Indian Ocean toward the great inland plateau. The mountains present their high ridges to the atmospheric current ; and serve as points of condensation, producing clouds, mist, showers, refreshing and nourishing to vegetable-life in their vicinity : but checking the further-inland progress of the same. One cannot fail to note the result, in the more withered aspect of the herbage, which is encountered in travelling toward the interior, or westward of these mountains. The land gradually becomes more arid, until the sterile waste is reached where the annual rainfall seldom exceeds 1 or 2 inches. These mountains traverse all the divisions of South Africa. From an agricultural and pastoral point of view, their influence is very great. Owing to the heavier rainfall and more humid atmosphere which they cause, the land in their neighbourhood can be cultivated with success : while the veld has a greater capability of carrying stock, because the grass is more nutritious than elsewhere. Artificial irrigation seldom becomes necessary : consequently, land in these districts, being much sought after, commands high prices.

Climate presents the most positive limit to the existence of vegetable-life. An elevation of only a few hundred feet (more or less) changes physical conditions, converting arable land into pasture or vineyards, pasture or vineyards into forest, and (sometimes) fertile soil into barren desert.

South Africa has many lakes : but it has few sea-ports and fewer rivers. The chief Rivers are the Zambesi, Limpopo, and Orange, with their respective tributaries. Most of the other so-called rivers are mere

**Mountains as  
influencing  
rainfall.**

**Climate.**

**Influence of  
Climate on  
vegetable  
life.**

**Sources of  
water.**

## SOUTH AFRICA

streamlets in winter. Many of the latter have eroded deep channels. Some exhibit water all the year round : but most of them act as freshets only in summer, and are dry in winter. There are other streams, the water of which occasionally disappears in the earth, re-appearing on the surface many miles away. Other streams again are brackish and, consequently, useless either for irrigation or domestic purposes.

### **Dry river-beds.**

Dry river-beds indicate a short season of heavy rains, which fall in torrents and carry everything before them. The result is denudation of the high lands. Valuable organic and vegetable constituents of the soil are swept away, and deposited in the lower-lying valleys, or borne by the floods into the sea.

### **Formation of water-courses.**

The constant movement of large flocks of sheep, or droves of cattle, from one kraal to another, or between pasture and water, wears away deep paths. Sudden heavy downpours of rain on the dry parched land, instead of penetrating the soil, seek the network of paths made by these animals. Thus are formed *sluits* and *dongas*. As often as new paths are made, just so often do the irresistible deluges of the rainy season convert them into regular water-courses.

### **Rainfall.**

The Eastern and North-eastern Districts of South Africa derive their rains from the east during the summer. In winter, the north-west wind prevails, which, emanating from tropical deserts, is dry and of high temperature, and produces extreme aridity. The South-western Districts are affected in summer by the south-east wind, which is very dry. In winter, they are swept by the north-west wind, which comes from the equatorial regions of the Atlantic and is laden with moisture, causing the wet winter season so favourable to agriculture and pasturage in the western province of Cape Colony.

### **Subterranean springs and reservoirs.**

Subterranean springs exist. Many people are led to believe that an inexhaustible supply of water lies beneath

## PHYSICAL AND GEOLOGICAL FEATURES

the earth : that it only is necessary to bore a hole sufficiently deep to reach it ; and that the natural pressure of the water will cause it to rise to the surface. In some countries, this has been the case : indeed, the experiment has been made successfully in some few parts of South Africa. Occasionally a source of water has been discovered and tapped more by guess-work than by scientific study of conditions.

All subterranean springs, or underground reservoirs, owe their origin to the rainfall. The permanency of such springs and reservoirs largely depends on the rocks' capability of secreting water, i.e. on the rocks' porosity. Even where they are porous and possess great absorbing and secreting power, they will prove worthless as underground reservoirs without an adequate annual rainfall. Therefore, the nature of the various rocks, as well as the nature of the catchment-areas of water, must be examined. **Their origin.**

It is a most difficult matter to estimate the quantity of water below the surface of any particular district : but to form such an estimate is almost impossible in South Africa, the rainfall being so much more variable than in other countries.

**Effect of  
rainfall in  
various  
districts.**

Nearly all the rainfall takes place during the hot months of summer. The ground then is parched and the crust hard. The rain-water flows off the surface in freshets, before it has time to soak into the depths of the soil. In the south-western districts of Cape Colony, however, the rainfall occurs in the cold months of winter, causing a considerable percentage of the rain-water to be absorbed and stored in natural subterranean reservoirs. Some of these have been discovered and bored successfully : many others, no doubt, await to reward investigation.

Impervious clay or shale, overlying small areas, acts like the roof of a house in carrying-off all rain which falls thereon. To sink a well in such a place would be

## SOUTH AFRICA

futile: unless there was evidence of the underlying rock's porosity, and of water having percolated to it through some fissure or porous soil.

**Comparison  
of  
subterranean  
water-  
supply of  
South Africa  
with that  
of Australia.**

I was told that inexhaustible reservoirs of water could be tapped by boring in South Africa, because this had been done already in Australia. A comparison of the physical configuration and geological formation of the two countries will disclose salient differences precluding possibility.

**Australian  
water-  
bearing  
strata and  
catchment-  
areas.**

The water-bearing strata of Australia generally are found at great depths, covered by impermeable rock or clay. These underground reservoirs receive their supply from natural catchment-areas situate at a considerably higher level. Therefore, when the water is tapped, it rises many feet above the surface, often from depths of 500 or 1,000 feet.

**South  
African do.**

I failed to find similarly favourable natural conditions in South Africa. The natural catchment-areas do not seem to be placed sufficiently high above those natural reservoirs whose locality is known at present. Consequently, water from a great depth will rise to the surface in very few places. The various governments would do well to undertake systematic experiments in deep boring, so as to determine once for all the water-bearing capability of the colonies.

**Systematic  
boring  
recom-  
mended.**

**Opinion of  
Mr. Thomas  
Stewart.**

In this connection Mr. Thomas Stewart, of the Hydraulic Engineering Department of Cape Colony, may be quoted. In a very able article on *The Underground Water-Supply of South Africa*, he says:—

“ So far as we know, the prospects of finding large quantities of water, especially under pressure, are not  
“ very favourable.”

**Sufficient  
natural  
provision for  
watering  
stock in  
South Africa.**

Water sufficient for stock is found at shallow depths generally throughout South Africa. In travelling by railway from Capetown to Pretoria, it will be observed that surface-wells have been sunk at almost all the

## PHYSICAL AND GEOLOGICAL FEATURES

platelayers' houses along the whole length of the line, where enough water for domestic purposes is obtained at a depth of 15 – 30 feet below the surface.

There are many natural and thermal springs.

**Thermal and Mineral springs.**

Geologists say that there has been a gradual drying-up of rivers and springs. Many sources, which formerly were known as yielding a good supply of water, either have diminished or have failed entirely within the last half-century. Numerous hollows are to be found in various parts of the country, which (in the memory of natives) were at one time perennial receptacles of fresh water. They are empty, and thinly coated with nauseous bitter salt. I myself saw several dry river-beds which, only a few years ago, exhibited flowing water in the dry as well as in the rainy season. From one cause or another, the springs which supplied them have dried-up ; and for the last few years have failed to yield a drop of water.

**Gradual and progressive failure of rivers and springs.**

I have already referred to brackish water. I also found several extensive areas of brack soil, which I take to be the result either of brack springs in the vicinity, or (possibly) of the evaporation of brackish water from the earth itself. Some lands had become quite brack and unsuitable for agriculture, owing to excessive irrigation and improper drainage. Salt-bushes, imported from Australia, were growing luxuriantly on these soils. These are a valuable fodder for sheep and goats. They flourish where there is but little moisture ; and, therefore, may be cultivated extensively in districts where nothing else will grow.

**Brackish water and soil.**

**Salt-bushes.**

Many of the South African Marshes have exceedingly fertile soil. Both mineral and vegetable elements are found to exist in them. Systematic drainage is needed to reclaim and make profitable most of these marshes.

**Marshes.**

Evaporation is an important matter in a country like South Africa. On many farms, dams have been

**Effect of evaporation on artificial dams.**



## SOUTH AFRICA

erected to conserve water for irrigation purposes. The porosity of the ground beneath, the smallness of catchment-areas, and the great evaporation, have contributed to annul the usefulness of many of these dams.

### **Uselessness of the Van Wyk's Vlei Irrigation Reservoir.**

The Van Wyk's Vlei Irrigation Reservoir in Cape Colony cost the Government £18,000. Its water surface was about 19 sq. miles. Its holding capacity was 35,000,000,000 gallons. Its average depth was but 10 feet. The rainfall for three successive years (1893-5) was only  $4\frac{1}{2}$  inches. The catchment-area was 240 sq. miles. Therefore, a 10" annual rainfall was necessary if the dam were to be filled. But many important facts had been overlooked. Evaporation, which (in this district) was estimated at  $7' 2''$  a year, — i.e.  $2'$  more than the actual rainfall, — was not the least of them.

### **Dr. Halley's experiments in evaporation.**

Dr. Halley made a number of experiments at St. Helena, as to the quantity of water which is evaporated daily from the sea. He found that 10 sq. inches of the ocean's surface yielded one cubic inch of water in 12 hours. At this rate, one sq. mile, in a similar period, would yield 401,448,960 cubic inches, i.e.—1,500,000 gallons a day.

### **Dew.**

Although heavy dew falls at times, none falls except under a very clear sky. The thin covering of a cloud seems to serve for keeping the earth warm, by preventing radiation of heat. The moist mild cloudy days of spring and early summer, which rejoice the heart of the English farmer who knows how conducive they are to the young growths on his land, are much missed in the healthy districts of South Africa.

## SOIL

South Africa undoubtedly has been proved to be exceedingly rich in minerals. Volcanic action at a remote period has been extensive : but the displacement of rocks has been comparatively local. I am not aware however, that any systematic geological survey (other than partial surveys of mineral areas) has been made.

**Soil.  
Mineral  
wealth.**

All soils primarily are due to the pulverization of underlying rocks. Few subjects can be of greater import to the farmer, than the character and material of such rocks as assist in determining the quality of the soil.

**Origin of  
soils.**

The rock-formation of South Africa is very diversified. Primary rocks may be seen rising in masses throughout the country. They are composed of crystalline matter, either in the form of granite, sienite, micaceous schistus, serpentine quartz, and intersected by secondary rocks of siliceous sandstone, calcareous sandstone, limestone, schist : or in the form of shale, rock-salt, basalt. It is not necessary to describe the constituent parts of each rock. Primary rocks predominate. Granite covers a large proportion of the surface ; and is the foundation of most of the secondary rocks. The pulverized soil of the secondary group is more fertile than that of the primary group. Limestone and basalt give the best result where the soil is deep : but a mixture of the pulverizations of all the various strata, brought together either by the action of water or by cultivation, is superior (as a soil) to any other combination.

**Rock  
formation of  
South Africa.**

**Pulverization  
of all the  
strata forms  
most suit-  
able soil for  
agriculture.**

The soil is the agriculturist's raw material. Its productive power makes him — or mars him. In considering the effect of soil and climate, it should be realized that the one is the direct and the other (often) the indirect result of geological conformation, which, on this account, may be said to exercise much influence in the distribution of vegetable-life, and hence deserves to be considered with reference to the same. The

**Relative  
effect of  
soil and  
climate.**

## SOUTH AFRICA

farmer, who can adapt his methods to the inherent characteristics of the South African soil will carry-off the best of the rewards which await the energy and resourcefulness of the cultivator.

**Classes of  
soils.**

South African Soils vary very considerably. It would serve no useful purpose to attempt to classify them except in the terms generally adopted by agriculturists, viz.—Light and Heavy Soils.

**Description  
of light  
and heavy  
soils.**

Light Soil, containing sand, is so called because it is easier to work : although its specific gravity is greater than that of heavy soil. Heavy Soil, containing clay and a small quantity of vegetable-matter, is so called from its adhesiveness and the degree of resistance which it offers to the implements of cultivation : although its specific gravity is less than that of Light Soil. Light Soil predominates in South Africa.

**Analysis of  
soils.**

I have submitted several samples of characteristic soils for agricultural analysis : but the details of the process need not be set down here. There are various other methods by which the quality and texture of soils approximately may be determined. The difference between a gold assay and the operation of “ panning ” will furnish a rough but apt analogy.

**Result of  
rough  
analysis.**

My reason for submitting samples for minute analysis, however, lies in the following grave fact. As the result of numerous “ panning ” tests of soil taken from nearly all the districts of South Africa, I have not discovered any evidence upon which to base a favourable opinion of the soils’ staying power and reproductive capability. From this condemnation I must except certain rich (but proportionately small) alluvial deposits, which I consider exceedingly fertile : indeed, I may say that I never have seen any soil surpassing these deposits in reproductive power ; and I am by no means sure that I could indicate their equal. They are to be found in valleys, along river-beds, and in pockets, throughout the country.

**Exceptions.**

## SOIL

I have found small quantities of this fertile soil in almost every district : but Rhodesia has by far the largest area. Given good seasons and other favourable conditions, these alluvial deposits are capable of producing crop after crop, with very indifferent cultivation and without manure, for several years in succession. But, as I have said, this fertile soil exists in very small proportion ; and my opinion of the general soil is unfavourable. In case my rough and ready " panning " tests should have been inadequate, I have supplemented them by minute professional analyses for purposes of corroboration.

**Rhodesia  
richest in  
fertile  
areas**

**Reasons for  
seeking  
professional  
analysis.**

One phenomenon has political as well as agricultural significance. It is a fact that, wherever an alluvial pocket is found, in the Orange River Colony and the Transvaal, there, almost invariably, stands a Boer in the capacity of owner.

**A political  
and  
agricultural  
phenomenon.  
The Boer in  
possession  
of all  
alluvial soil.**

New-comers often drew my attention to their discoveries of exceedingly fine crops in many parts of South Africa—the proved product of the fertile soil, but of small plots of ground. These new-comers were wont to exercise their critical faculty at the expense of the farmer, whom they denounced as being indolent and unprogressive, because he did not cultivate at least a part of the rolling plains surrounding his little agricultural Golconda of only a few acres in extent. It was my invariable custom to try each particular case upon its merits. Close examination made the following facts clear to me. These fertile (and consequently valuable) alluvial deposits have very clearly defined boundaries. On this side of a line, the soil has all the qualities which are required for successful agriculture. On that side, it at once begins to give place to the original soil which is derived from the natural rock beneath. Between the alluvial soil and the natural soil there is a vast difference. The former possesses reproductive power, and (therefore) economic

**Delusions of  
" tender-  
feet."**

**Sharp line  
between  
fertile and  
sterile areas**

## SOUTH AFRICA

<b>Relative value of alluvial and natural soil.</b>	value, in a very notable measure : while the latter has the power and the value hardly at all. On the evidence of crops produced on the two soils, I am of opinion that one acre of alluvial soil is worth twenty acres of the natural soil.
<b>Location of alluvial areas.</b>	The proportion, which the valuable alluvial soil bears to the valueless natural soil, is extremely small. The rich alluvial valleys and pockets in the healthy districts of Natal, Cape Colony, Orange River Colony, Transvaal, long ago have been snapped up by Boer farmers. They represent the result of sixty years' (and more) prospecting on the part of the Boers and early settlers ; and, as a consequence of so many years experience and opportunity, the Boer to-day is the indefeasible holder of these alluvial areas.
<b>All owned by Boers.</b>	It is not an uncommon thing to find a farm divided and sub-divided into very small portions. The separate owners of each are to be seen jealously guarding their cultivated plots, and leaving unnoted the open country surrounding them on every side. They have exercised the faculties of discrimination and acquisition. They have taken all that is worth taking.
<b>Soil-coverings as conducive to retention of moisture.</b>	Grass clothes the soil ; and trees and shrubs shade it. Stripped of these coverings, it lies exposed to the merciless rays of a subtropical sun. Its power of retaining moisture then becomes greatly reduced : for the absorbent properties of dry air are much greater than those of soil.
<b>Humus.</b>	Humus is a great absorber and retainer of moisture : it, therefore, is one of the most valuable and indispensable constituents of fertile soil. But, except in the alluvial deposits, there is a marked absence of humus in the soil of South Africa.
<b>Roots as pulverizers.</b>	Lack of grass and trees and shrubs accentuates incapability of production. Whether the theory (that trees attract rain) be sound or not, their roots undoubtedly serve to pulverize the hard ground : their foliage shelters the surface from the sun ; and

## SOIL

their rotten leaves help to fertilize the soil. Plants and leaves, deprived of life, are subject to decomposition of structure. A few days suffice to disperse their tissues. In the work of decomposition, change slowly is effected similar to that which fire would effect with much greater rapidity. In both instances, the organic elements escape in the form of gases: while the mineral elements are left as residues.

**Uses of  
follage.**

Absorption of heat is much affected by the quality and colour of the substance exposed to its action. The depth, to which the heat of the sun will penetrate the soil, depends upon these conditions of quality and colour.

**Absorption  
of heat.**

The action of the sun causes rich mould very rapidly to deteriorate, and to become poor and unproductive soil. The sun begins to play its part in the process of deterioration just as soon as the farmer sets to work. Rapid degeneration of soil is the consequence of cultivation.

**Effect of sun  
on soil.**

In England, and in all countries which enjoy less sunshine and a much higher degree of humidity than South Africa, very few of the natural elements of the soil escape in the process of cultivation. The problem of the English agriculturist is how best to expose the soil to the sun's influence. His South African brother has a more difficult task to perform.

**Difference  
between  
farming in  
temperate  
and in  
tropical  
zones.**

I compared two soils in the Transvaal: one for some years had been exposed to the influence of sun and air by cultivation: the other was protected by a natural covering of grass. The former had lost all its valuable constituents: the latter was a rich mould. The soils which formed the subject of my experiment, although they were not exhausted by cropping, could give only poor results. Yet the two were not different soils: but the same soil. The difference consisted solely in the fact that the rich mould, with its natural covering, had been left un-

**Soil exposed  
to sun  
compared  
with grass-  
covered  
soil.**

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disturbed, in the one case : while, in the other case, the same rich mould had been stripped of its natural covering by the cultivator, whose unfulfilled design was to turn it to economic use and to win an agricultural profit from it + his misdirected efforts.

**Irregularity  
of veld a  
cause of  
impoverish-  
ment of soil.**

The veld does not cover the whole surface of the soil. The grass grows in tufts : the intervening spaces are bare. Torrential rains wash away the uncovered soil ; and, with constant grass fires, tend to accelerate the wasteful process of denudation. Thus the soil is impoverished by removal of its valuable elements, which may be seen in flood-time in the rivers.

**Gradual and  
progressive  
denudation  
of soil.**

Irregularity of soil-covering is a striking feature of the country. Heights have been washed bare ; and the washings deposited in other parts. General denudation seems to be in progress. Organic substances have been, and are being, washed-away from the surface of large areas. These substances only can be reproduced by the action of similar organisms already existing or having existed. Therefore the poverty of the soil of many districts is accounted-for.

**Rapid  
exhaustion  
of land  
under  
cultivation.**

The rapid deterioration and exhaustion of cultivated lands, in a climate like that of South Africa, compels the serious attention of those who engage (or who intend to engage) in agriculture. Even soil which has a natural covering suffers to some extent : but poor soil under cultivation altogether ceases from production, after two or three crops, until several fallow years have given it an opportunity to replace its lost constituents. Pasturage, however, though it may not improve, will not deteriorate the soil, except in cases where too much grass-burning is practised.

**Unfitness of  
very light  
soil for  
agriculture.**

Very light soil is most unsuitable for agriculture. The grass, which it produces, is fairly good : but, when once the veld is ploughed, and the natural crust broken, it will take many years to win back the old condition.

**Opinion of  
Professor  
Wallace.**

Professor Wallace, in his *Farming Industries of Cape Colony*, says that an attempt at thorough cultiva-

## SOIL

tion on the English plan has not always proved successful. He gives an illustration of the superiority of native customs over European innovations. A crop of mealies (maize) in an Englishman's field (which had been ploughed three times during summer) was devoured by grubs. A Kaffir's adjacent crop escaped : for the Kaffir only had scraped his soil. The parent-grub would appear to have found the well-ploughed furrow a more attractive place in which to lay its eggs.

**Comparison  
of Kaffir  
mealie-crop  
with English.**

I myself visited several Kaffir mealie-fields, in order to find out the reason why they invariably produced better crops than most of the fields, in the same district, which were cultivated by white people. Noting an old Kaffir, with his pick, breaking-up new veld to a depth of 3 or 4 inches, I imagined that only the laziness characteristic of his race prevented him from digging deeper. The soil appeared to be very fertile ; and was from 10 to 14 inches deep. I took the pick from him ; and, in my own way and according to my own idea at that time, I began to turn-over the soil to a depth of 8 or 9 inches. The Kaffir immediately stopped me, saying, " Na, Baas : na mealie — dig deep ; " and he expounded to me the whole art and mystery of successful agriculture as practised by the Kaffir race. His premisses were as follows :—

**Explanation  
of the  
Kaffir's  
method of  
Agriculture,  
with  
Illustration.**

- (a) that most moisture came from below :
- (b) that, if the soil were loosened to any considerable depth, air and the sun's rays would be admitted :
- (c) that, if hard solid ground remained below, the mealie-roots would penetrate it :
- (d) that the admission of air and the sun's rays, below the mealie-roots, would cause evaporation of moisture contained in the hard solid ground :
- (e) that, if drought set in, the mealies thus would have no source of moisture :
- (f) that the hard solid ground below the mealie-roots always contained more moisture than the broken ground on the surface ; and, in case of drought, it often would suffice to prevent the mealies from being scorched.

**The Kaffir  
Particulars.**



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**The Kaffir Universal.** From which he very logically concluded that his mealie-seed required no more than a mere covering of soil.

**Opinion of Sir Humphrey Davey.** Sir Humphrey Davey, one of the chief authorities on English Agriculture, in a lecture to the Board of Agriculture, said,

"Deep-ploughing may be very profitable practice in a rich thick loam ; but in a fertile shallow soil, situate on clay or sandy subsoil, it may be extremely pre-judicial."

**Experiments at the New York Agricultural Station, Geneva.** At the New York Agricultural Station of Geneva, a plot of  $\frac{1}{10}$  of an acre was divided into 10 parts ; and experiments were made to determine :—

- (a) How far the amount of moisture (in the proportion of soil occupied by the roots of crops) may be influenced by treatment other than artificial watering :
- (b) What depth of surface-tillage retains the greatest amount of soil-water :
- (c) The relative capabilities of mulching and of tillage for retaining soil-moisture.

**Facts established by do.** It is not necessary to give details of these experiments : but the conclusions certainly deserve consideration. It was established—

- (a) That, by keeping the surface of the soil stirred to a depth of only half-an-inch, the water-content of the first twelve inches was increased to a very appreciable extent :
- (b) That, the deeper the tillage up to four inches, the greater was the increase in water-content :
- (c) That the rate of increase then diminishes as the depth of tillage increases :
- (d) That a slight mulch of half-an-inch exerts a far greater influence in retaining water than tillage four inches deep.

**Parkinson.** Parkinson,<sup>(1)</sup> a farmer of great experience in England, Ireland, and America, says of the latter country.

"The land is ploughed in a skimming manner, and a stranger will frequently suppose that by deeper

(1) *The Experienced Farmer*, p. xiv.

## SOIL

“ploughing, the produce would be increased, but such practice would be injurious.”

The exhaustion of land in South Africa is ascribed to successive and excessive cropping. Another (and perhaps a more well-founded) opinion is that exposure of the soil to the sun's rays is the most decisive factor in the soil-history of the country.

**Cause of  
soil-  
exhaustion.**

In England, deep-ploughing most frequently is an indication of sound farming. Theorists are invited to consider the significant fact that the Kaffirs, merely by scratching the ground with a hoe, almost invariably harvest crops immeasurably superior to those obtained from deep-ploughed lands. The depth of soil (which ought to be exposed by cultivation) is a matter which calls for very careful study ; because rules, which are safe enough in application to other countries and climates, will be found unsuitable and even detrimental in South Africa. Soils differ, it is true. I am well aware that in certain districts, where the soil is a rich thick loam of good depth, deep-ploughing and English methods of cultivation will not be found unsuccessful. Such places are few and circumscribed : South Africa is vast and wide. They are the exceptions which prove the rule. The proof of the pudding is in the eating ; and, judging generally and from the evidence of the crops produced, I am of opinion that the archaic Kaffir is the best all-round cultivator of South Africa, so far.

**Deep-plough-  
ing in  
England  
and in  
South Africa.**

**Approval of  
the Kaffir  
methods of  
Agriculture.**

In categorising the defects of the soil of South Africa, the lack of phosphate must be named. By reason of the absence of phosphate, both stock and cereals suffer. Animals may be seen devouring bones wherever they can get them. Cattle are found lying on the veld, suffering a kind of paralysis caused by want of phosphate. Their disease is akin to “rickets,” the common ailment of children in the big towns of Lancashire and Scotland, for which Chemical Food

**General  
absence of  
phosphates.**

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### **Deposits of natural phosphates.**

containing phosphate invariably is prescribed. Mr. Hutcheon, Chief of the Cape Veterinary Staff, has done great service to South African farmers by convincing them that bone-meal is a good substitute for phosphate. Many stock-breeders now give it to their cattle, with excellent results. The only part of South Africa where natural phosphates are known to exist is in the Orange River Colony, a stretch of country of 100 x 30 x 40 miles, bordering on Basutoland. The whole of this area is more or less charged with phosphate of lime, each cubic yard of rock containing about 40 lbs. The constant pulverization of these rocks by the action of the weather, and the carrying (by rains) of the phosphates thus released on to the soil, account in great measure for the singular fertility of this well-known region.

### **Absence of suitable sub- soil.**

Another notable defect in South African soil is the absence, in many parts, of a suitable subsoil. By "suitable subsoil" I mean a subsoil which (by absorbing water from the surface during the rainy seasons, and dispensing the same to vegetation during drought) is indispensable to the successful cultivation of the land.

### **Sterility.**

South Africa may be said to be a barren country. The exceptions to this rule lie in the more humid districts.

### **Causes of variation.**

The diverse characters of the soil, its various altitudes, the climate and meteorological conditions, have tended to produce a variety of herbage, shrubs, and trees which, in many cases, are peculiar to the district of their production. It is most usual to find the maximum of a species in one place : but it is far from

## VEGETATION AND CLIMATE

being uncommon to find representatives elsewhere. The relation, between climatic conditions and occurrence of species, is by no means constant and invariable. Some plants may be seen universally spread over the world : others seem to be limited to certain narrowly defined areas. Most species of vegetable-life, are capable of amelioration by methods of selection, cross-breeding, and cultivation ; and the members of a species are capable of deviation, and frequently do deviate, from the type of the species.

If a full and satisfactory knowledge of the vegetation of South Africa is to be obtained, each species individually and carefully must be studied through its Spring, Summer, Autumn, and Winter conditions. The task is rendered difficult by the facts, that in different parts of the country different names are given to the same species, and that little or no really scientific information is obtainable from the inhabitants of South Africa, aboriginal or otherwise.

The grasses of South Africa roughly may be divided into two classes : the Sour, and the Sweet. These two divisions are susceptible of almost infinite subdivision. Most grasses exhibit long and straggling form, chiefly occurring in tufts, altogether dissimilar to the mat-like growth of our English lawns and meads.

Animals will eat either the Sweet Grass or the Sour ; but a sudden change of grass, from sweet to sour, often produces sickness and other bad results.

Sweet grass is far more nutritious than the Sour variety : but both species are improved by being constantly eaten-down, or mown-down, at the proper seasons. I have observed that, where the rainfall is evenly distributed, e.g. along the Drakensberg or Quathlamba Mountains, grass is generally of a superior and more nutritious quality. Lucerne grows exceedingly well under irrigation ; and now is cultivated largely throughout the country. In some places,

**Present  
ignorance of  
the vegeta-  
tion of  
South Africa.**

**Grasses :**  
(a) Sour;  
(b) Sweet.

**Their form.**

**Their effects  
on animals.**

**Sweet Grass  
more  
nutritious.**

**Location of  
Sweet Grass.**

**Lucerne.**

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where there is no irrigation, it is seen to flourish. This is because the roots of Lucerne will penetrate to a depth of 15 – 30 feet; and, therefore, where there happens to be a natural supply of water beneath the soil, artificial irrigation becomes unnecessary.

**Comparison  
of  
indigenous  
with  
imported  
grasses.**

All grasses which came under my notice were of an indigenous nature. Imported grasses would not always prosper, except under irrigation. In any case the culture of short-rooted grasses should not be attempted, because of the general dryness of the surface soil. I did not form an entirely favourable opinion of the grasses of South Africa. It must be said, however, that stock (which has been scientifically selected for the different districts) thrives remarkably well upon the indigenous herbage of the country, when such herbage is free from weeds, poisonous plants or tulips—the latter occurring generally in districts up to 3,000 feet above sea-level. This only is the case when the animals are free from the various diseases which afflict and too frequently thin-out the stock of the country.

**Mimosa-Tree  
indicates  
Sweet Grass  
and water.**

**Sugar-Bush  
indicates  
poor soil  
and herbage.**

**Opinion  
concerning  
veld grass.**

**Recommendation to  
future stock-  
farmers.**

I found the *Mimosa-Tree* a safe indication of the presence of sweet nutritious grass. It also indicates the presence of water at no great depth below the surface. The *Sugar-Bush*, a stunted useless shrub, is a certain indication of poor soil and poor herbage.

Much of the veld-grass is generally suitable for hay and ensilage for winter feeding. There is a great possibility of development in the direction here indicated.

The stock-farmer of South Africa will find his future safety in hay and ensilage. The production of these will enable him to keep his stock in condition, not only during the three or four months when the grass is dry and contains no nutriment but also, during the cold weather when the animals require better fodder than at any other time of year. There will be no

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need to consider the question of the demand for agricultural produce, if the farmer will keep enough stock to consume the produce of his farm. The farmer's stock is his own best customer. Nothing pays better than being in a position to consume, on the farm itself, all the forage and grasses raised on the said farm. In most countries it is an invariable rule of agriculture, that the man who sells all his hay, forage, and cereals, is always "in low water." No outside profit ever will compensate him for the stock which he is bound to lose for want of winter fodder, or for the soil which he has exhausted by selling-off all its produce while making no return in the shape of manure.

**Stock as the  
farmer's  
best  
customer.**

Most of the grasses of South Africa are fit for hay and ensilage, if they be harvested at the proper time. This condition is important to be noted. I observed many farmers attempting to make a little hay from grass which they had allowed to run far beyond the flower-stage. They ought to have known that the wiry and innutritious product, which they called hay, was not worth the trouble of harvesting.

**Hay and  
Ensilage.**

I noted numerous poisonous plants, which rob pasturage and arable land of much of their value. There are many weeds which exclusively infest grasslands : but a still greater number invade and flourish in cultivated lands, especially where artificial irrigation has been introduced. The effect of these weeds on the value of pasturage is not very great : but, on cultivated land, their presence means either a disastrous increase of the labour-bill or the smothering of the expected crop. Sometimes, the apathy of the agriculturist, or the insufficiency of his forces, allows the weed-harvest to obtain the upper hand and overrun his farm. In the Barberton district of the Transvaal, I noted a weed called "pigeon-weed," which had been left to seed for three or four years. Its eradication presented a task surpassing the wit or power

**Poisonous  
plants and  
weeds.**

**Their locality**

**Their effect  
on  
pasturage,  
and  
on arable  
land.**

**Pigeon-weed  
incurable.**

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or perseverance of man to compass ; indeed, it aptly might be named as a Thirteenth Labour for Herakles.

**Superstitions  
beliefs an  
obstacle to  
scientific  
agriculture.**

I met in South Africa certain ill-informed persons who believed in the myth of spontaneous generation — of weeds, for example. Up to half a century ago, it perhaps was difficult to understand how the germs of life came to occur in certain situations and circumstances. Nowadays, however, the mystery is no mystery : except to those who do not enlighten themselves (from sources of information almost everywhere available) upon subjects vitally interesting to them. Yet some farmers even now believe that worms and serpents are engendered from horse-hair in water, that toads spit poison, that the scab-parasite comes from dirt or poorness of blood, and that weeds grow from no seed.

**Natural  
methods of  
spreading  
weed-seeds.**

Nature has many secret methods of spreading weed-seeds, and of preserving them intact in the bowels of the earth for a considerable time. Wind is one of the most patent of these methods. Rains and streams are general carriers of seeds. The "Burry" species of weed attaches its seed to the wool or hair of animals. Birds also convey weed-seeds from place to place.

**The problem  
of weeds.**

The growth of weeds in South Africa is a most serious matter. I have not seen such an assortment of weeds, annual, biennial, perennial, in any other country. The idea of uselessness always is present in the mind when a weed is spoken-of : but, as a matter of fact, every plant other than that which is intended to grow in cultivated lands is a weed. I never heard of a country where crops are smothered by weeds, or where weeds grow more quickly than in South Africa, especially in the irrigated districts. This one item alone is by far the gravest in the farmer's labour-bill ; for very often it is a question which would be the greater loss, to permit the weeds to choke the crop,

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or to go to the expense of weeding. In face of a plague of these dimensions, the farmer of to-morrow must approach the problem scientifically.

Climate and weather are very important factors of agricultural success. Climate decides the species of vegetable—and animal—life of certain areas. Weather contributes to the successful or unsuccessful cultivation of those species. It is possible to have a fine climate but unfavourable weather ; and *vice versa*.

**Distinction  
between  
climate and  
weather.**

From the point of view of the health-seeker, the climate of South Africa leaves little to be desired. From the agricultural and pastoral point of view the weather of South Africa is extremely unsatisfactory.

**Climate of  
South Africa  
healthy : but  
unsatisfactory to the  
farmer.**

Theban Pindar says :—

**Sun and Rain**

“ As gold stands first among a rich man's goods,  
“ so stands the sun among celestial bodies :  
“ so, water among Nature's gifts to men.”

But, in South Africa, the splendour of the sun scorches vegetation ; and, the rainfall being at times unseasonable or deficient and at all times unreliable, artificial irrigation of cultivated land becomes a paramount necessity.

The difference, between the rise of temperature by day and its fall by night, is very great. The first is caused by the tropical glow of the sun, and by the clearness of the atmosphere which permits the free passage of the sun's fierce rays. The second is caused by the rapidity with which the great heat of the day is thrown back into the dry air of night. This great rise and great fall of temperature has been likened to an occurrence of summer and winter in the course of every twenty-four hours. Few of those who went through the South African Campaign could have failed to note these phenomena.

**Extreme  
and sudden  
variation of  
temperature.**

These circumstances must be seriously considered by stock-farmers. Cattle, sheep, and horses, are very

**Effect of  
climate**



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**variation on stock.** susceptible to cold. After a hot day, the extreme and comparatively sudden change is likely to produce grave results. The cold is most intense at that time of year when grass is poor and innutritious. The animals then draw upon the fat which they have accumulated during the favourable season, in order to keep up the heat necessary to maintain circulation of blood. In three or four months this store of fat is exhausted ; and then it is no uncommon thing for droves of cattle and flocks of sheep to die of literal starvation. Shelters, and some amount of artificial fodder, then become absolutely necessary for keeping beasts in condition through these trying seasons.

**The remedy indicated.**

**Apathy of South African Farmers.**

**Comparison between short-haired and long-haired cattle. Farmers must rear long-haired cattle or build shelters.**

**Wet and dry seasons.**

South African farmers do not approach the problem of inclement weather in a scientific manner. It is difficult to estimate what the actual gain would be to the stock-farmer who would take the trouble and expense of substituting suitable shelters for the open-kraal system now in vogue, where the stock has not room to lie-down and generally is up to the hocks in mud : but I know that I would prefer to leave my cattle exposed rather to the English winter nights than to those of South Africa ; and my reason simply is that in South Africa the change from heat to cold is so extreme and sudden. In many parts of the country, I found farmers who preferred short-haired cattle to long-haired. They alleged that the coats of the latter harboured ticks. I invariably noted that cattle, with a fairly good coat, remained in better condition than short-haired cattle during the winter months. Therefore, in South Africa, the stock-farmer must rear long-haired cattle : or he must build shelters in which to protect his short-haired cattle.

The South African year may be divided broadly into Wet Season, and Dry. The early rains come at the beginning of summer, i.e. at the close of October. They increase in force and frequency until the end of

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April. From that time to the end of October there is practically no rain.

The seasons in South Africa occur as follows :—  
*Spring* : September, October, November ; *Summer* : December, January, February ; *Autumn* : March, April, May ; *Winter* : June, July, August.

**Spring,  
Summer,  
Autumn,  
Winter.**

The seasons in the South-western parts of Cape Colony differ as much from those of other portions of the country as do the seasons of one Indian Province differ from those of another. South Africa is vast ; and the South-western District of Cape Colony, with its rainfall in the winter, is only a small portion of an enormous territory which (elsewhere) has its maximum rainfall during the warm months of summer. Another peculiarity is notable. The wet season in the Eastern Districts is divided into two periods. Heavy rains fall at the beginning of summer : an interval of fine weather ensues ; and then comes the heavier rainfall generally ending the wet season of the year.

**Exceptions.**

**S.W. Districts  
of Cape  
Colony.**

**Eastern  
Districts.**

Important influence upon fruit-culture is exercised by these variations of climate and weather. Dry summer prevails only in a limited area. In other districts, where the soil is suitable for fruit-growing, the rains are contemporary with the ripening season. Thus great risk is incurred in the effort to market the fruit in prime condition.

**Influence of  
weather  
upon fruit-  
culture.**

Some plants require great heat to bring them to maturity. Annuals are not subject to winter cold. Some perennials, although they are very partial to warm weather, nevertheless do not suffer from extreme cold under which others die.

**Effect of  
weather on  
vegetation.**

Definite zones of vegetable-life flourish at definite elevations above sea-level. Their limits depend on moisture and temperature. Animal-life, however, is not so much influenced by these conditions.

**Zones of  
vegetation.**

The high plateaux throughout the country are noted for their dry and salubrious air. As a health-resort,

**Salubrity of  
plateaux.**

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South Africa possesses many districts the climate of which cannot be surpassed. But agriculturists would prefer a more moist and cloudy atmosphere, as being in every way more suitable to crops and stock.

**Opinions of South Africa as a stock and cereal country.**

Favourable opinions of South Africa, as a cereal- and stock-country, have been pronounced. I will cite (and strictly dissociate myself from) one such opinion, formed after six months' stay in the country.

"You seldom, if ever, have cold east winds here, such as we were having in England when I left last April.  
"Your farmers need not be anxious about fine weather for the harvest: corn never will sprout in the ear in such a climate as this. I consider South Africa to be an ideal country for the farmer."

**Inapplicability of English axioms to South African conditions demonstrated.**

Experience teaches. Aphorisms and generalizations, which by chance may be applicable in England, do not generally hold good in South Africa.

"When the wind is in the east,  
"Tis good for neither man nor beast,"

says England. True: but in South Africa it is the west wind which is dreaded and the east wind which is valued because it, and it alone, brings the inestimable moisture-laden clouds from the Indian Ocean.

"Happy is the bride on whom the sun shines,"

again says England. In South Africa, where a wet day means an agricultural gain of thousands of pounds, brides are considered happy though married in drenching downpours.

**Cursory opinions derided.**

Both stock-farming and agriculture in South Africa are serious pursuits. They are carried on under innumerable and well-nigh insuperable difficulties. Optimistic opinions on the agricultural prospects of South Africa, often have been hurriedly formed

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by men who have not had time accurately to gauge the importance of these two factors — climate and weather.

What I have said already about the extreme and rapid variations of the temperature, which are the peculiar feature of the climate, will make it easy to be understood why an unqualified clean bill-of-health must be denied to South Africa. The country on the whole is salubrious: but only just so long as its versatile and fickle climate is borne in mind and prepared-for. The change from day to night is a matter of course: but, often in the midst of dry warm weather, a bitterly cold day has to be reckoned-with. New-comers frequently neglect the caprices of the climate. Hence come chills, with fevers, agues, pneumonia, and a host of similar ailments in their train. The only way of counteracting climatic inconstancy is, no matter how settled the weather may appear to be, always to have at hand sufficient clothing for protection against sudden changes.

Heat, on the high plateaux of South Africa, though great, is harmless. Sunstroke, and similar forms of paralysis, are unknown. It is the absence of moisture in the air which makes it bracing and salubrious. I noted three classes of white men in South Africa, viz.:—those who were new-comers, those who were born there of emigrant parents, and those whose ancestors had inhabited the country for ages. On comparison, I am of opinion that the white race loses nothing of physical strength or stature by sojourn in South Africa.

Certain low-lying districts are infected by malaria

**Vicissitudes  
of tempera-  
ture  
responsible  
for disease.**

**Imperatively  
necessary  
precautions.**

**Sunstroke  
unknown.**

**Dry air  
bracing and  
salubrious.**

**Physique  
unaffected by  
the climate  
of South  
Africa.**

**Malaria.**

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<b>Epidemic in low-lying districts.</b>	for the greater part of the year. The country is large; and there is no occasion at present for any one to settle on those unhealthy portions. At an altitude of 4,000 feet and upwards, malaria need not be dreaded. It is true that many cases of this insidious disease occur even in the healthiest districts. These invariably are cases of transported malaria from the lowlands. The scourge is much less virulent than it formerly was: it seems to abate and disappear at the advance of civilization and the cultivation of the soil.
<b>Its retreat before civilization.</b>	
<b>Location of Malaria.</b>	Cape Colony and Orange River Colony are malaria-free. Natal, with the exception of a few districts, also is free. The Transvaal, Bechuanaland, Rhodesia, have enormous areas free from fever: but a very malignant type of malaria infests their lowlands.
<b>Pneumonia.</b>	Pneumonia is at times very prevalent: it deserves to be classed among the characteristic diseases of South Africa. It chiefly is caused by the inconstancy of the climate, of which I have written above. In the vicinity of the mines, the fine dust from the tailings appears to impregnate the very air. It is a cause of throat-irritation and pulmonary disorders.
<b>Due to climate and to dust in vicinity of mines.</b>	
<b>Typhoid or enteric.</b>	Typhoid or Enteric Fever was quite an epidemic during the War; and numerous subsequent cases have occurred. It is one of the zymotic or filth-diseases. Under the late regime, it was due to utter absence of sanitation and absolute disregard of all the laws of cleanliness. During the Campaign the effects became manifest by reason of the great number of human beings whose lives were sacrificed. At the present time, the typhoid or enteric bacillus thrives only in the towns where the sanitary arrangements are still very imperfect. In the country districts, this foul disease is unknown.
<b>Due to filth.</b>	
<b>Insanitary towns.</b>	
<b>Sanitary country.</b>	

## Live Stock

**T**HE farmers' live-stock subsists on vegetation. Vegetation is diversely distributed throughout the globe. Therefore, the distribution of graminivorous animals is governed by that of vegetation. There is a close relation between the animal- and the vegetable-kingdom. Animals, which are not artificially fed and sheltered when natural conditions are unfavourable to them during certain seasons of the year, habitually migrate to more favourable districts : but vegetation is more or less limited by climate and soil. Notwithstanding that the range of animals is more extensive than that of vegetation, it cannot be said to be unlimited. The ox and the horse, to name no others, generally are found wherever man is found : but the animals of these species differ in size, shape, quality, constitution, etc., according to the conditions of the district which they inhabit. The difference is due to their power of adaptation. Hence it may be said that location is the great moulder of animal-characteristics.

**Vegetation  
governs  
distribution**

**Location  
moulds  
character-  
istics.**

It will be found that all cattle, which exist under similar conditions of climate, soil, and vegetation, resemble one another in character and contour. A study of these conditions invariably will be of great assistance to the stock-breeder, who is selecting a new country in which to raise stock with success. The verdict of Nature's accumulated evidence, as to the influence of soil, climate and vegetation, on the

**Nature's Laws  
must be  
obeyed.**

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evolution and differentiation of cattle is unquestionable. Natural influences and natural laws should be recognised, and taken-advantage-of, by the careful and judicious selector : because, when Nature is on his side, success reasonably may be expected and certainly may be attained. It is difficult to deliver people from the foolish prejudice which causes them to war against Nature. They see the effect of natural conditions : but they will not give a moment's thought to the cause of the effect. Consequently their case is hopeless. Dr. Johnson says that it is Nature's delight to counterchange the plans and purposes of man. That certainly is true, when men pay no heed to Nature's laws.

**Cattle in  
England.**

In England there are about 23 recognised breeds of cattle. More than half that number are reared in certain localities : because of their special adaptability to those localities. They are, in fact, now recognized as the peculiar cattle of the district in which they are bred ; and each breed thrives best in its proper district. Perhaps they are not the cattle of their owner's fancy. Probably the owner of Short-horns would prefer Aberdeen-Angus : or the owner of Devons, Herefords : but, from an economical point of view, the tried and proved cattle of the district suit the district best. A sagacious farmer, therefore, always will take natural conditions of soil, vegetation, and climate into consideration, before making a selection of cattle or sheep. It is true that, with artificial food and shelter, almost any cattle may be reared successfully in almost any district : but the process is not an economical one. Adam Smith says that, by means of glasses, hot beds, and hot walls, very good grapes can be raised in Scotland ; and very good wine too, can be made of them ; but with about thirty times the expense at which at least equally good wine can be brought from foreign countries.

**Conditions  
must  
influence  
selection.**

## LIVE STOCK

Even in South Africa, a study of the economy of warmth comes cheaper than the equivalent of warmth in food.

As well as climate, the physical and geological conditions of every country exercise great influence in determining the characteristics of cattle. Youatt, one of our greatest authorities on cattle, says:—

**Doctrine of  
Youatt.**

“ In purchasing cattle, whether in a lean or fat state, the  
“ farmer should on no account procure them out of  
“ richer or better grounds than those into which he  
“ intends to turn them. He should select them either  
“ from the neighbourhood, or from such breeds as  
“ are best adapted to the nature and the situation  
“ of the soil.”<sup>(1)</sup>

Sinclair and Barlow and other authorities state the same doctrine.

That this doctrine is by no means a new-fangled and fantastic notion may be seen from the works of various ancient writers on husbandry, such as M. Terentius Varro (B.C. 26), L. Jul. Moderatus Columella (A.D. 42), Palladius Rutilius Taurus (A.D. 210).

“ Oxen ought not to be brought from fertile plains to  
“ hard and mountainous countries, if it be possible  
“ to avoid it.”<sup>(2)</sup>

**Doctrine of  
Varro.  
Doctrine of  
Columella.**

“ Cattle, bred upon the ground, are much better than  
“ foreigners: for the former are not put to the trial  
“ either of water or food or air, or incommoded with  
“ the situation and customs of the country, as the  
“ latter are which are brought from fertile plains  
“ to rough mountainous lands. For this reason, if  
“ we are obliged to bring oxen from a place at a  
“ distance, care must be taken to bring them from  
“ such grounds, as our own.”<sup>(3)</sup>

“ It is better to buy cattle from neighbouring grounds,  
“ because these are put to no trial by the change  
“ of air: or, if this cannot be done, to bring them  
“ from like ground to like.”<sup>(4)</sup>

**Doctrine of  
Palladius.**

<sup>(1)</sup> Youatt, *Complete Grazier*, p. 87.

<sup>(2)</sup> Varro, *De Re Rustica*, I. xx. 2.

<sup>(3)</sup> Columella, *De Re Rustica*, VI. ii. 12.

<sup>(4)</sup> Palladius, *De Re Rustica*, V. xi. 3.



## SOUTH AFRICA

**English  
conditions  
compared  
with South  
African.**

A comparison of the relative conditions of England and South Africa perhaps will assist in the forming of an idea as to the importance of selecting breeds which are suitable to the latter country, and of a scientific knowledge of the actual district in which cattle are to be reared.

**English  
conditions.**

Great Britain and Ireland have an aggregate area of 120,000 sq. miles. The two highest mountains are Snowdon in Wales (3,570 feet), and Ben Nevis in Scotland (4,406 feet). All our stock is raised at an altitude of under 2,000 feet, except in a few cases where sheep graze on the mountains during a few months of the year. Most of our different breeds of cattle are absolutely necessary to meet the natural conditions of their respective localities. We know that cultivated grasses will not grow at a higher altitude than 1,500 feet. We know that the range of climate and temperature is less in altitudes of under 1,000 feet than in altitudes of 7,000 feet. And from this knowledge we deduce that it would be absurd to attempt to rear a breed of shorthorns on Snowdon or Ben Nevis. Temperature changes as we ascend mountains. Stock, which is acclimatised to the different altitudes, is superior to stock not so acclimatised.

**South  
African  
conditions.**

Far otherwise is the case of South Africa. Its area, of about 1,240,000 sq. miles is more than ten times larger than ours. Its altitudes vary from sea-level to 7,000 feet with an additional 3,000 feet for mountains: which means that cattle are required to thrive in temperatures varying from 105°-110° Fahr. to freezing point. The scientific English stock-farmer will understand the paramount importance of selecting none but such cattle as be suitable to these widely differing conditions. South Africa requires at the very least as many breeds of cattle as the Mother-Country: indeed, if the areas of the two countries

## LIVE STOCK

are taken as the basis of the calculation, South Africa should require a great many more breeds. I do not wish to press the latter point unduly : but I cannot but condemn those who advocate the theory of a single breed for all South Africa. No peculiar expert possibly could urge that one breed would be found more suitable than a variety of breeds selected for their special adaptability to the district in which they were to be reared. Yet the thing has been said, by responsible as well as irresponsible persons in and out of South Africa. Some place their trust in Short-horns and some in Devons : some fancy Frieslands and others Herefords : while the Australian naturally plumps for Australian cattle. Nor ought I to omit to mention the man who has his eye on commission for cattle-buying ; and who advocates the Madagascar breed. His view was weighed in the balance of the Transvaal and was found terribly wanting. This "expert" (*sic*) had said that Madagascar cattle, if imported, would be immune against all diseases. Instantly some hundreds were imported ; and, within a few months, 70% died. The history of all the cattle diseases by which South Africa has been, and is being, scourged has its origin in the importation of foreign cattle. The dates are coincident. South Africa had its own breeds of cattle before a white man set foot in the country ; and the natives knew of no cattle-disease till foreign cattle came. In Rhodesia, where King Lobengula kept six hundred thousand cattle, disease did not exist until after the Occupation of 1893 when importation was initiated. And, at the moment of writing, South Africa can boast (if she chooses) of all the known cattle-plagues of the world, the result of ignorant opposition to Nature's laws.

I know that some imported cattle have done well in South Africa, not without artificial food and shelter : but it is a notorious fact that such breeds

**Importation  
coincident  
with disease.**

**Imported  
cattle lose  
original  
character-  
istics.**

## SOUTH AFRICA

**Unshorthorned  
Shorthorns.**

**Nature's  
transformation.**

**Native cattle.**

gradually lose all resemblance to, and characteristics of, their imported ancestors. The cattle of Texas, imported by the Spaniards A.D. 1500, have lost every trace of that breeding which their ancestors possessed so highly: while the same species of cattle in Spain to-day maintain equal rank with any in Europe. Certain farmers, who had imported cattle for breeding purposes, saved them from the ravages of the War by sending them over the Border into English territory. I inspected a nice breed of what the owner called Shorthorns. They had been kept pure since their dams' and sires' importation, four or five cattle generations ago; and they provided an excellent example of natural adaptation to environment. Climatic and other influences had produced a breed of shorthorns, in which almost every proper characteristic of the breed, as known in England, was lost. The handsome head, intelligent expression, docility, arched ribs, well-covered hips, prominent hind-quarters, short neck, short legs, short horns, and the mellowish touch of the Shorthorn, all were absent in this breed. The pure progeny of pure progenitors literally had been forced into the mould provided by the natural circumstances of the country. They had been obliged to forage for themselves in summer and winter. They had been deprived of shelter from the sun that shineth by day, and from the low temperature of night. The result was as I have indicated — a breed which bore none of its characteristics, an altogether unshorthorned breed of Shorthorns. Nature had determined both the process of transformation, and its outcome. It is difficult to imagine a more wretched animal than the shorthorn on scanty keep and exposed to the vicissitudes of the weather. Someone has compared him to a faded tulip planted where a cowslip would have flourished.

If South Africa had been without native cattle,

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I should have addressed myself to this subject from another point of view. But it is not. Probably the native cattle are not purely indigenous: but they certainly were there as long ago as A.D. 1650, when the early settlers reached the Cape; and this fact, I imagine, may be taken as constituting (what I will call) prescriptive autochthoneity. The chief breeds are the Afrikander, Damaraland, Zulu, Hottentot, Mashona, and Angoni.

The Afrikander is a dark-red beast with very large gay upstanding horns, exhibiting a typical specimen of adaptation. Like his owner, the Boer, the Afrikander Ox is precisely what the country has made him. He is the inevitable product of the rigorous operation of natural laws. He can exist, and even thrive, on what nourishment the veld offers. In comparison with other species under similar circumstances of existence, the Afrikander always will be in better condition. He is a sturdy trekker, strong, active, and reliable. His power of endurance is remarkable. For transport and the butcher, he scarcely can be equalled: he certainly cannot be excelled, providing that his circumstances are no worse than those of other breeds. The Afrikander breed may not be the best for dairy purposes: as a general rule good stock-cattle are not. The Afrikander ox has the weakness which is characteristic of all South African animals, viz., the light hind-quarters, flat ribs, long legs, long neck, long body, big coarse bone, and altogether incompact form. His carcase weighs 600-650 lbs. He will thrive and put on more flesh than any other breed of cattle under similar conditions. Hence, I am of opinion that, for a general breed, it would be difficult to surpass the Afrikander.

The Mashona cattle are small, and best suited to the country from which they take their name. I agree with Mr. Selous who describes them as "beauti-

**The Afrikander.**

**The Mashona.**

## SOUTH AFRICA

ful little cattle." They have many things in their favour. They fatten rapidly, putting meat on the valuable points. Their bone is small. They have a mellow touch, prominent yet placid eyes, moderately long neck, a fairly good spring in the ribs, rather rough shoulders, short head; and their carcase weighs 350-400 lbs.

**The Angoni.** The Angoni cattle resembles the Mashona in some respects: but they are smaller, and have a hump well-placed on their shoulders. The head is inclined to be large in proportion to the body. The neck is thick and of good dimensions: the shoulders are well buried in the carcase, which is more barrel-shaped than that of any other South African cattle which I saw. The chest is wide and of fair depth: the hips are rounded and the loins prominent. The legs are fine and fleshy down to the hock: the ribs well-arched with a great distance between the hock-bone and the last rib. The quarters are fairly long and straight: the tail well on a level with the back, dropping squarely. The ears are thick: the eyes prominent: the skin thin, and touch mellow, with fine glossy hair; and the carcase weighs about 300 lbs. I saw several of these cattle on Dr. Sauer's farm near Bulawayo. Their owner informed me that he had had them for some time; and that, since their arrival, they had put-on a great deal of flesh. They certainly were in the pink of condition at the time when I inspected them. It was said that these cattle were immune against Redwater; and Dr. Sauer sent six of them to Bulawayo, so that they might be subjected to infection. Dr. Koch, under whose care they were at Bulawayo, said that four of the six contracted the disease and died, but that two did not take it, and therefore must be regarded as immune against it. Some of these small Angoni cattle are wonderful milkers. Mr. S. Lewis of Bulawayo told me that he knew of one

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of them which gave 6 bottles of milk i.e. which produced the exceptional weight of 1 lb. of butter. The standard measure for milk in South Africa is the ordinary three half-pint bottle. Six bottles of milk go to the gallon. A good milker should give about fifteen bottles a day. Twelve bottles of milk will produce on an average one pound of butter.

The Zulu cattle are small, extremely hard, with very thick but short horns. They are excellent trekkers; and live on what the veld offers.

**The Zulu.**

The Hottentot cattle are big, rough, and coarse-boned, badly shaped, with long legs and enormous horns. They are not equal to any of the cattle here described.

**The  
Hottentot.**

Mr. Cotton Oswell, in his book *With Livingstone to South Africa*, says :

**Mr. Cotton  
Oswell's  
discoveries.**

“By the shores of Lake Ngami, a gigantic long-horned breed is found. Through Livingstone I obtained one 6' 2" high, with horns measuring from tip to tip 3' 7" and 14' 2" round from one point to the other, taking in the base of the skull.”

He also mentions a miniature breed: most remarkably small things like Durham oxen, 3' high.

In these old and tried breeds, Afrikander, Angoni, Mashona, the stock-breeders of South Africa possess an asset of incalculable value. I do not think that any systematic effort has been made to improve these valuable native breeds: but I consider that such an effort would be rewarded by most interesting, valuable and profitable results. As a breed, the Afrikander ox has been neglected woefully; and he has now reached the worst limits of bad breeding. Nevertheless he has preserved some wonderful points. I have seen cattle in England much in the same condition: which, by judicious selection and strenuous effort, were caused to rise from the bottom of the scale to the very top, in a comparatively short period. Verisimilar results can be obtained with the Afrikander

**Afrikander,  
Angoni,  
Mashona,  
an asset of  
incalculable  
value.**

**Neglect.**

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breed. They have a sound constitution: they are natural foragers: they have been acclimatising for ages; and are now in perfect harmony with their environment. Cattle of coarse breed thrive better on harder fare than well-bred cattle. They should form an excellent nucleus for breeds, which are bound to prove a credit to the country and a source of substantial profit to the breeder. Mr. Burrows, a well-known authority on farming, says that the breeder's most important consideration ought to be the adaptability of his stock to the situation and climate, to the soil which he cultivates, and to the crops which he can grow. I strongly advise men, who have special aptitude for cattle-breeding, to take up this important matter of establishing South African breeds from the cattle of the country. It soon would become manifest that no importation of foreign cattle is required; and that diseases would diminish rather than increase.

**Prizes for  
improvement.**

**Herd-book  
necessary.**

**Rhodesia's  
sagacious  
policy.**

**Imported  
cattle.**

**Frieslands  
best all  
round.**

Any serious attempt, to lift these cattle to the high plane of value which is their natural right, of course must include substantial encouragement in the shape of prizes at the various shows throughout the country. A herd-book also is an important essential. I was pleased to note that the Rhodesian farmers had adopted the very sound and sagacious policy of offering, at their shows, much higher prizes for Afrikaner cattle than for any other breeds.

Imported Shorthorns, Devons, Herefords, Dexter-Kerrys, Jerseys, Guernseys, Frieslands, are to be met-with on farms chiefly in Cape Colony and Natal. They are good milkers and good feeders, when they are thoroughly understood by their owners. They do well, when they escape disease, and when they are as well cared for as in England: but they gradually tend to lose their original characteristics. Of imported cattle, the Holstein or Frieslands are the best all-round breed. They originally were imported from

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North Holland and West Friesland. They are large heavy animals, with good form indicative of milking qualities. They are hardy, white and black in colour, and more remarkable for the quantity than for the quality of their milk.

Importation of cattle never will have lasting and satisfactory results, except perhaps for crossing purposes ; and only then when the importer is prepared to provide circumstances similar to those of the country from which the cattle are imported. This condition of success, from its costly nature, appears to me to negative the notion of importation, except for the special purpose of judicious crossing. Different breeds differ considerably in aptitude to feed. South Africa is not the country for heavy cattle or heavy sheep. Beasts of medium size have proved, and will continue to prove, themselves unquestionably the better suited to the climate and other natural conditions. Farmers, who are devoid of South African experience, and who probably ignore the advice of those who have such experience, have found-out to their cost that it does not pay (in the matter of stock-raising) to play at cross-purposes with Nature. What South Africa wants, and must have, is a breed of cattle which can thrive under existent conditions of climate and food. Imported English cattle, scions of a stock which has been fed highly and tended carefully for generations, hardly can be expected to take kindly to the veld, to forage for themselves throughout the year, to adapt themselves to the ever-changing temperature. It must not be forgotten that such cattle, by custom of generations, have acquired the habit of expecting food to be handed to them. It is part of their nature. They cannot shift for themselves, as do the native cattle of South Africa. Darwin says—

**Imported  
cattle only  
useful for  
crossing.**

“That habit and custom has some influence, I must believe both from analogy and from incessant advice



## SOUTH AFRICA

“given in agricultural works, even in the ancient  
“Encyclopædias of China, to be very careful in trans-  
“porting animals from one district to another: for  
“it is not likely that men should have succeeded  
“in selecting so many breeds and sub-breeds, with  
“constitutions specially fitted for their own district.  
“The result must, I think, be due to habit. On the  
“other hand, I can see no reason to doubt that  
“natural selection will continually tend to preserve  
“those individuals which are born with constitutions  
“best adapted to their native countries.”

Instinct and Habit may be, or may not be synonymous terms: but it is unnecessary to attempt definition here. I am more concerned with the diversities of instinct as a mental quality of animals. It is an accepted fact that cattle (as well as other animals) inherit domestic instincts, which often are totally different from instincts inherited in a more or less wild state. Not only the mental qualities but also the external form of our selected domestic animals vary to a much greater extent than that of natural selection. Instincts are useful, providing that circumstances be unchangeable: but such instincts at the least must embarrass an animal which suddenly is compelled to submit to a total change of circumstances. The instincts of South African cattle differ radically from the instincts of English cattle. This is a point not without interest to those who contemplate the importation of cattle to South Africa. In the latter country, the natural instincts, acquired by the fittest survivals of the struggle for life, are most suitable for the circumstances in which they are found; and, on them, may be builded the solid foundation of an improved breed. It would take many generations of English cattle to acquire, by inheritance, the instincts which are vitally essential to the cattle of the South African veld. Therefore, out of the successive varieties provided by Nature in the indigenous droves of South Africa, the most suitable cattle for that country will be raised.

**Objections to** The objection, which some farmers have to the

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native cattle, is that they do not give much milk. The majority of these cattle are accustomed to produce only sufficient milk for their calves, and for adding to their own flesh against the lean months when they are compelled to draw-upon their accumulated reserve of fat in order to keep up their constitution. If our best milkers were turned-out to rear a calf ; and if the remainder of the milk were left, such cows would develop milk-fever and die. With us, milking is the rule. In South Africa it is the exception. Consequently, South African cows produce milk sufficient for their necessity, and not much more. Nature has her laws. If the South African farmer wants more milk, he must obey those laws : carefully select the most suitable cattle for the purpose ; and keep-on breeding, until he becomes possessed of the milch-kine of his desire.

**Native  
cattle.**

**Milch kine  
result of  
breeding.**

The question of blood demands care and attention. Regarding South African cattle, there is an untold treasure, in the old breeds which the country possesses, only awaiting development. At present, the South African farmer lacks patience, and aptitude for selection from the cattle at his door which would produce the very varieties most suitable to his requirements. He nourishes the vain desire of starting his stock-farm with cattle, which English breeders and English conditions and a century of time have raised to their present high standard. In order to have cattle which are as suitable to African conditions as English cattle are to English conditions, the African stock-farmer must follow the lines of Bakewell and other notable breeders : he must start where they started, i.e. at the beginning. Kindlier and better treatment soon would change the disposition of the African cattle. The kind disposition of most of our well-known breeds is due entirely to the kind treatment to which they have been accustomed for generations.

**Blood.**

**Treatment.**

## SOUTH AFRICA

**Large droves  
or small.**

That breed of cattle (which presents the highest degree of variability) is the most favourable for the methodical breeder : because it gives him more matter and more scope for selection. Also, it is well to bear in mind that the larger the number of cattle so much the larger is the variety. Wherefore, number is of great importance to the breeder. Hence, small breeders (who confine themselves to dealing with a limited number of cattle) do not succeed so well as those who deal with larger droves. It is well-known that our English donkeys are among the worst-bred animals in the country and have made so little progress, because they are kept only by poor people, and in such small numbers, that the varieties (which Nature produces) cannot be taken-advantage-of as is the case in other countries, where donkey-breeding is carried-on systematically and on the grand scale. This rule applies also to cattle. It is the farmer who maintains large droves, or who selects from his neighbours' droves as well as from his own, who achieves the best results.

**Selection.**

The principle of selection is far from being a hypothetical one : ample proof exists of what our noted breeders have accomplished. A study of our domestic animals will convince naturalists as to how great the power of man has proved to be in its accumulation, by his successive selection of varieties. In Saxony, the principle of selection is regarded as being of prime importance, especially among the merino-sheep farmers. There, the selectors of breeding-stock are professional men. The sheep are placed on a table, to be studied and examined and judged, like sculpture by Royal Academicians. External features, not internal construction, gives scope to the selector ; and no good can be obtained unless there is a definite object in view. When once the standard is settled, the rules of classification become simplified. Now what object

**Method of  
Selection.**

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has the South African farmer in view? A trek-ox? A slaughter-ox? A small ox, or a medium ox, or a large ox? Does he want an ox fitted for existence on the natural conditions of the veld, the capacity of which he himself thoroughly has grasped? Or has he a type of Shorthorn or Devon or Hereford in his mind? If this be the case, is he prepared to provide the artificial fodder which undoubtedly was the means of raising such stock to their high perfection in England? Or does he want milch-kine? Or cattle which will rear calves while fattening themselves? All these questions must be answered before the farmer is justified in adopting any one breed, or selecting from the variety of breeds which surround him.

The man, who is going in for Stock-farming, must first make-up his mind whether he will deal in stock-cattle or in dairy-cattle. If the former, then the milk- and butter-producing qualities must be sacrificed: if the latter, then the points which the butcher favours must be abandoned. There are principles which are appropriate to the various kinds of stock. It is the long and continuous breeding, on one definite plan for one definite object, which generally attains success. The milk- and butter-producing qualities of cattle can be regulated, just as surely as their capabilities for laying-on flesh.

The abominable custom of chasing cattle, exciting milch-kine with whips and dogs, which is usual in many parts of South Africa, has very deleterious effects on the milk-production.

It is an historical fact that rational and methodical animal-breeding goes hand in hand with the social and economical status of a people. Where civilization does not reign, there the domestic animals preserve their original characteristics: the primitive breeds remain primitive, and are not improved in any way by judicious selection. In the end, this system (or non-system) produces degeneration.

**The farmer must choose his breed; and breed.**

**Abominable custom.**

**Breeding accompanies civilization.**

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**The only way.**

So long as the South African farmer remains undecided in his own mind, as to whether he wants either a breed of cattle possessing milking qualities or a breed which will command the appreciation of the butcher, just so long will he continue to make little or no progress with his stock. In the case of the man who has a good strain of Afrikander or Angoni cattle, neither of which are very good milkers nor have any special points for the butcher, there is only one thing in all the world for him to do. He must choose the breed which he intends to establish; and breed steadily to it. There is no other way.

**Concerning inter-breeding.**

Interbreeding sometimes is condemned on the ground that it tends to physical imperfection: but general experience seems to point to the contrary. Most of the celebrated English breeders have been close in-and-in breeders. It will suffice to cite Bakewell (the founder of the long-horn breed), Price (one of the most successful breeders of Herefords), Collins, Mason, Maynard, Sir Charles Knightly, etc. (who brought Shorthorns to their present perfection). The breeder needs to study the matter very closely; and, when he finds better cattle of the same breed as his own in other hands, he should acquire them at any price.

**Concerning cross-breeding.**

Some say that the best results are obtained by crossing various breeds. Good results undoubtedly have been obtained by this method: but our best and proved breeders strongly were opposed to cross-breeding, except among closely allied sub-breeds. These men could detect the slight differences which would go absolutely un-noted by the inexpert observer.

The South African farmer thinks that the weight of his cattle will be augmented. Augmentation ensues: but it is augmentation of bone unaccompanied by any corresponding improvement in other points. This system is condemnable, in that it produces mongrels: for bulk, or size, does not constitute

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perfection in cattle. Small-boned cattle, if they be of good quality and constitution, are far better than a large coarse breed, says Bakewell.

Stock-farming in South Africa is at present in the hands of careless breeders. An industry of such importance requires special aptitude and special talent. Therefore, if the stock of the country is to be raised to the level whereon it ought to stand, a radical change in present methods becomes imperative. If the ordinary stock-breeder would condescend to draw nearer to his cattle, observing them closely, studying their wants, there soon would be a marked improvement. It is the individual care and attention to the development of English cattle, which has made them what they are. When English breeders' methods are compared with the desultory methods of South Africa, it becomes easy to see how the great gulf, fixed between the cattle of the two countries, may be bridged. The South African farmer must give to South African cattle what the English farmer has given to English cattle :—viz., full consideration, calm deliberation, systematic scientific suitable treatment. No part of the farming industry requires so much mature judgment as the management of live-stock. Stock-grazing is a science, not to be so casually comprehended as the uninitiate imagine.

I noted much carelessness in placing heifers, which were too young, into breeding condition. This practice, not being in conformity with Nature's laws, is bound to produce a bad result. The growth of the parent is stunted : the progeny suffers with the progenitor. It stands to reason that a young heifer, which itself is incomplete in bone and muscle, becomes over-taxed by the task of feeding its offspring. In England, the recognized age for putting the heifer to the bull is 22 months. In Africa, heifers and bulls are herded together, with consequences which need not be described.

**Aptitude and  
talent  
required**

**English  
assiduity  
vs.  
African  
apathy.**

**Stock-  
grazing a  
science.**

**Sundry  
particulars.**

## SOUTH AFRICA

**Food for  
thought.**

England is the cradle of the world's cattle-breeds. Her cattle are the result of scientific breeding and intelligent care. If the importers of English cattle treated their imports as English breeders would treat them, the success of English farmers would be emulated and repeated : but many failures have been due to the vain assumption that artificially-bred cattle will thrive under conditions which naturally-reared cattle hardly will pull-through. Let the South African farmer, who fancies English-bred cattle and whose circumstances do not permit him to care for them as the English breeders would, ponder these things.

**Herefords re-  
commended  
for crossing.**

As far as my judgment of the English breeds is concerned, I am of opinion that preference should be given to the importation of Herefords for the purpose of crossing with native cattle. Herefords are remarkably good feeders : they lay on flesh abundantly in proportion to the food consumed : their aptitude to fatten is favoured by their general placidity of temper. They come early to maturity : they have proved themselves good trekkers : their progeny, no matter what the cross may be, displays more of the Hereford characteristics than of the cross. They are smallish in size, but very compact. In the Argentine and in North America, Shorthorns have been discarded in favour of Herefords. They are not phenomenally good dairy-cattle : but, for general purposes, no English cattle are more suitable to cross with African than the Herefords.

**Dairy Cattle.**

To try to run a cattle-ranch with dairy-cows, and to try to run a dairy with selected stock-cattle, are equally futile pastimes. The really good dairy-cow is not a good mother to a calf : because she will give him too much milk. Consequently, when winter comes, she herself suffers, having disposed of what should have been her reserve of sustenance. Cows, which have to face South African conditions all the year round with-

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out artificial food, must be able to lay-on flesh and fat during the milking period : otherwise they will not be able to pull-through. For dairy-purposes, the characteristics must be artificial to a certain extent. The milking characteristics of a breed is the result of abnormal development. The well-known milk-producing breeds are deep milkers simply because they have been bred-up to that end. Each point can be developed in exact proportion to man's effort — points for the dairy, or for the shambles. The farmer's stock is perennially repeating itself, improving, or deteriorating.

Either a dairy-breed or a stock-breed could be obtained successfully from the native cattle of South Africa, upon condition that the breeder has a special aptitude for breeding, taste for classification of his stock, power of judicious selection, and that he will make a careful study of the soil, climate, and vegetation, most suited to the requirements of his animals. Such stock, in a short time would be one of the most valuable assets the country could possess : for the secret of the future prosperity of South Africa lies in the stock-farming industry.

Among the various kinds of sheep and goats, the Merino and the Afrikander or Fat-tailed sheep, and the Angora and Cape goats, are the best known. Sheep and goat-farming is one of the leading industries of South Africa. Much greater progress would have been made in it, had not diseases brought great loss to farmers. Scab and Heart-water are among the worst of these plagues ; and I regret to say that the former certainly, and the latter probably, could have been stamped-out long ago if the Governments of the country had been more energetic and persevering.

In most sheep-farming districts, the Merino-sheep hold the first place. They are well adapted to the conditions of the country : they possess a sound con-

**Opinions.**

**Sheep and Goats a leading industry.**

**Hindered by Government apathy.**

**Merino sheep.**



## SOUTH AFRICA

- stitution ; and are good feeders. The original breed was imported in the early part of the nineteenth century : although a few specimens had been imported earlier. The first importations were not very successful ; and some years passed before Reitz Van Buda and Jourbet imported a fresh lot. These enterprising farmers made a great success ; and, in a few years' time, they were selling no less than 500 Merinos a year to neighbouring farmers. At that time, disease of any kind was unknown. Not until 1869 did the scourge known as
- Wire-worm.** Wire-Worm, kill 60 % - 70% of the lambs every year ; and, from then till now, the disease never has been out of the country.
- Shows and prizes.** The farmers of the early days were very progressive. Valuable prizes were given to breeders of the best sheep and horses. Shows were held ; and the exhibition of stock was much to the advantage of the farming industry in general.
- Wool.** The flock-master's objective has been the production of wool — and fine wool for choice. Little attention has been paid to the carcase : for the price of meat until a few years ago, was comparatively low. Then, also, wool fetched a much higher price than now. But
- Carcass.** at present there is a general tendency to study the carcase as well as the wool.
- An opinion.** South Africa possesses several very fine flocks of Merinos. Much attention has been paid to breeding : but the acme of perfection has not yet been reached. The sheep-farming industry will repay all the care which the farmers and the Government choose to bestow upon it : for it is a permanent industry ; and should go on increasing and improving.
- The Afrikaner sheep.** The Afrikaner sheep is the sheep of the country. Like the Afrikaner cattle, it is the aboriginal breed which was in South Africa before the white man came there. In the first instance, both sheep and cattle seem to have been the property of the Hottentots.

## LIVE STOCK

The Afrikaner sheep also is called the Fat-tailed sheep, from the very remarkable formation of its caudal appendage. The tail alone weighs from 7 to 20 lbs. and it is composed of a mass of fat, which sometimes is melted down to serve as a substitute for butter. The sheep itself is a hardy hairy leggy lop-eared breed ; and is much fancied by the butcher and by the Karoo farmer. The latter likes it, because it is not so susceptible of disease as other species, and because its hair does not collect weeds and dirt as is the case with wool.

Angora goats were imported into Cape Colony 50-55 years ago. Some good well-bred tribes are to be found in the Eastern and Midland Provinces : otherwise progress has been rather slow and only a few farmers have established well-known breeds. Enormous prices have been paid, and still are paid, for good rams : for many of the imported rams did not turn-out well, and often did more harm than good to the tribe. Many of the Angora breeds in the country are descended from Cape goats, which are in the habit of shedding their hair periodically.

In common with sheep-farming, Angora goat-farming ought to become a much more important industry than it is. The Governments of the various colonies can render valuable assistance by eradicating Scab and other diseases, compelling unprogressive farmers to fence their land so that the progressive farmers may pursue this promising industry in legitimate security. It is a gross injustice to the latter that their earnest efforts, to secure for their stock immunity against disease, should be frustrated by the noncurant indolence and apathy of the former. This matter is one which calls for authoritative intervention : for it is the duty of authority to protect the worthy from the unworthy.

There are other minor breeds of goats, much coarser

**Angora  
goats.**

**Room for  
improvement.**

**Government  
must act.**

**Other goats.**

## SOUTH AFRICA

in hair and meat than those which I have designated. The goat is the native's favourite animal ; and consequently exists in various species and various colours. Such goats, however, are not as profitable as the Angora : but, because they are hardier and better adapted to every altitude and every kind of vegetation, they are exceedingly numerous.

**Kraaling  
condemned.**

The present system of kraaling sheep and goats at night must be extremely detrimental to the wool, hair, and constitution ; and, so long as the kraal-system is in vogue, so long will the country have a hotbed of disease on every farm.

**Horses.**

**Retro-  
gression.**

**The Cape  
Horse.**

**Indian  
market.**

South Africa has not been able to retain the reputation for horse-breeding which it once possessed. During the last three decades, the tendency has been to breed horses more for their swiftness than for power and constitution. Nevertheless the country possesses some good horses, which are more suitable for South Africa than any horses which can be imported. The origin of the Cape Horse is not certainly known. Mr. Sartees, who is a notable authority, says that the original breed of horses at the Cape was a cross between a Barb of Northern Africa and a Persian Arab. No record, of the introduction of the former, exists at the present time : but there is some evidence which proves that the Dutch East India Company introduced the latter. Horses were imported from England in 1792 ; and, later, some Spanish horses were landed in South Africa. The breed gradually improved : but still a few defects remained. About 1815, more English horses were imported ; and importation was continued every year till about 1850. The imported horses were good ; and their introduction greatly enhanced the value of the breed. The Cape Horse became well-known and recognized, especially in India : to which country a large number were exported annually. This profitable industry might have been continued to the

## LIVE STOCK

present day, had it not been for the malfeasance of the speculator. This nefarious person contrived to dupe the horse-breeders of the Cape, by importing (as pedigree horses) animals which were the castaways of English studs. These were disposed of at enormous profit. It is well-known that at least one such horse was bought in England for five guineas, and sold at the Cape for five hundred. South Africa soon became the receptacle for all the equine rubbish which speculators could pick-up in England. Hence, the Cape Horse began to deteriorate, and no longer was required in India.

**Malfeasant speculators.**

Notwithstanding all his faults, the Cape Horse to-day is the best horse in the country. His weak points are :—

**The Cape Horse's weak points.**

- (1) a rather heavy and straight shoulder :
- (2) a long arm, and too short a leg :
- (3) light bone, and hind-quarters invariably too light.

His good points are :

**His strong points.**

- (1) he is an excellent forager :
- (2) he is handy, hardy, and a wonderful stayer.

Mares are not much used. They are kept solely for breeding purposes. This practice is indefensible, for the simple reason that many hereditary diseases do not develop except under stress of hard work. These diseases lie dormant in the unworked mare ; and, in that dormant state, they are conveyed from the dam to the foal. Farmers often experience severe disappointment when a colt, which is just beginning to do a little hard work, exhibits symptoms of spavin, roaring, ring-bone, etc. ; and they generally put it down to the sire, because the dam never has displayed unsoundness. I particularly noted the behaviour of mares during the War. Sometimes whole troops of them were rounded-up and made to work : but, after a few days under the saddle, they invariably developed the hereditary diseases which were dormant in them.

**Mares solely for breeding.**

**Dormant diseases.**

**developed by work.**

## SOUTH AFRICA

**Promiscuous  
Service.**

Some noted horse-breeders in Cape Colony and Orange River Colony, who have paid special attention to this industry, have achieved excellent results. But the majority of farmers are careless and casual to a degree, allowing the most unsightly and certainly the most unsound horses to serve their mares. Of course there is great difficulty in keeping the mares from these miscellaneous and wandering pests, simply because the country is imperfectly fenced. The Governments do not find it feasible to carry-out systematic fencing on so gigantic a scale; and, as very few farmers are at present in a position to fence their own farms, some other methods of dealing with the nuisance must be invented. It might be regulated that every colt over 18 months old must be gelded, unless the Veterinary Surgeon certifies to soundness and fitness to serve mares. Such a regulation would abolish many of the weedy beasts now roaming about the country. These can only be described as animals, which an English farmer (on seeing them in the same field with his mares) would shoot at sight.

**Fencing  
required.**

**Gelding a  
pis-aller.**

**Cape Horse  
recom-  
mended.**

I could not wish for a better saddle-horse than the Cape Horse; and as everything is favourable to horse-breeding in South Africa outside the horse-sickness areas, I think that it promises to become (once more) one of the chief industries of the country.

**Mules and  
Donkeys.**

Most of the mules and donkeys are importations. One of the best mules in South Africa is the Cape or Colonial mule, a small and compact little animal, wiry-constituted, and a great forager. The country offers very suitable conditions for the breeding of mules and donkeys. I am inclined to think that donkeys will be used for transport much more in the future than in the past, especially in low-lying districts where horse-sickness and the tsetse-fly act as a barrier against the employment of horses and cattle. The donkey's natural immunity against horse-sickness is a point greatly in his favour.

**Donkeys for  
future  
transport.**

## LIVE STOCK

The present prices, of £20-£40 for mules and £8-£15 for donkeys, offer sufficient encouragement to the breeder to cause him to develop and extend his plans. Many tracts of land suitable for the purpose can be bought at an outlay which would not fail to yield a handsome return. Hence, I am of opinion that there is more money in donkey-breeding than there is in many of the other farming industries of South Africa.

**Prices.**

**An opinion.**

Except in Cape Colony, and perhaps in Natal, pig-farming is not carried on extensively. This profitable industry hitherto has not received the care and attention which it deserves. In America, hog-raising is a profitable industry, exploited in the most modern and scientific manner; and, as pigs are more immune against disease than the majority of animals, there is no reason why South Africa should not develop this branch of stock-farming.

**Pig.**

**Neglect.**

The evidence of the few experts, who have paid special attention to pig-farming in South Africa, goes to prove that the smaller species are the more suitable for the country. There is a general idea that the larger breeds do not lay-on as much flesh, in proportion to the food they eat, as do the smaller breeds. This idea is formed on the assumption that, the further the heart is from the extremities, so much the more food is required to maintain the life of the animal. One thing is quite certain: the well-bred pig of a known pedigree has greater capabilities for putting-on flesh than the coarse and mongrel pig. And I will add that a cross often is beneficial: but it must be a cross of pure breed on both sides.

**Small pig  
for  
South Africa.**

Pig-rearing, like a few other farming industries, is not studied adequately. Most of the pigs which I saw were of the greyhound-type. They had long legs, long bodies, and were as fleet-footed in their movements as a hare. They always appeared wild and hungry. It was no uncommon thing to find many a drift of swine

**The  
"Lagenik-  
hys."**

## SOUTH AFRICA

### **Porcine atavists.**

living in the hills, foraging by night, and hiding by day. I saw a large number in the hills near Aliwal North. At one time they had belonged to a farmer in the district : but, when he went to the War, the pigs deserted his farm-yard, and were then as wild in the hills as the wildest of wild-pig. They had developed so extraordinarily strong an instinct of self-preservation, that there was no chance of touching them except with a rifle-bullet. A farmer in the district told me that it was much easier to get at a herd of deer than at these porcine atavists.

### **Berkshires recom- mended.**

Black pig has been found more suitable for the South African climate and vegetation than any other species. A cross of Tamworth  $\times$  Berkshire is about the best, owing to their colour, and their compact rotund form. When the animal and a better system of feeding it are understood, the industry should make rapid progress on its own merits ; and I believe that it will be found to be one of the most profitable branches of farming. Many farmers, in Natal and elsewhere, rear pig in *vleis* (marshes) allowing them to burrow for roots and to bury themselves in the soft ground, and giving them an occasional feed of mealies on the banks of the *vlei*. One man told me that he had about 200, to whom he gave very little corn ; and every week he was able to select several for the market, where they fetched a good price. He said that nothing paid him so well, or gave him so little trouble. The sows littered twice a year, each sow producing an average of 22 pigs a year. He regarded his piggeries much in the same way as another man would regard his rabbit-warren. The operation was entirely automatic. There was no trouble in rearing, feeding, or sheltering. It was to all intents and purposes a clear profit transaction.

### **Automatic pig-culture.**

### **Pork and Bacon.**

The price of pork and bacon is exceedingly high in the towns of South Africa ; and there is a much greater demand for these commodities than for vegetables.

## LIVE STOCK

The reason is that many townsfolk have small gardens, wherein they raise their own vegetables : but neither pig nor pigstye is seen in any town. The only drawback to the pork- and bacon-trade is the fact of the natives being keepers of pigs. Every one knows that the native pig is a scavenger, the filthiest beast in the country ; and this knowledge prevents people from buying native pork at any price, and causes them to look very much askance at any pork or home-cured bacon at all, unless they can be satisfied of its origin. The South African native never thinks of feeding either his dog or his pig. Indeed there is very little difference between the two animals : both being always in a state of semi-starvation, ravenously hungry, frightened of their own shadows, cursed and kicked by all. Therefore, before the people of South Africa can be induced to take kindly to home-grown pork and bacon, it will be necessary to have it branded by the feeder, if not by a Government Inspector. That is the only way in which suspicion can be allayed, and the native pig prevented from spoiling a promising industry, as he does at present.

Poultry farming is much neglected : though there are various breeds of poultry in South Africa and a few special breeders. The favourable and unfavourable localities have not yet been studied with a view to suiting breeds to situations ; and, consequently, much unnecessary disappointment and discouragement have fallen to the farmers. It is the old story of rule-of-thumb, of unscientific methods. A farmer fancies a breed which he sees in another district. He imports it to his district. Nature wipes it off the farm. The farmer vents surprise and indignation. It never occurs to him to consider how far he himself was culpable, in neglecting to note that the soil and conditions of the district, from which he brought the fowls, were totally different to those of the district to which he brought them.

**Poultry.**

**Locality.  
must be  
studied.**



## SOUTH AFRICA

**Black-Orpington best-all-round.**

Some poultry thrive on heavy clay-soil : others only thrive on light soil. In the former class, I noted that yellow flesh and yellow legs (Plymouth Rocks, Brahmas) were the best. The white flesh and white legged birds did not do so well on heavy soil. In some districts were Minorcas, Andalusians, and Black-Orpingtons. A judicious cross of the Black-Orpington with another breed seemed to me to be the best-all-round fowl for South Africa. Messrs. Cooke have established very successful poultry-farms in Natal and Transvaal. Their Orpington poultry-breed is the best in the country. Columella gave advice about poultry. He contended that the foot of a fowl of the best breeds ought to have five toes.

**Diseases.**

Poultry do not go scot-free from disease in South Africa. There is an obscure ailment which carries off a large number in wet weather ; and fleas, which collect round the fowl's eyes, also cause considerable mortality : while other dreaded diseases are, Fowl-cholera and Pip. Imported poultry is more immune against some of these afflictions than home-bred poultry, especially in Mashonaland, where the mortality among the native fowls is very high. Turkeys are more or less susceptible of all poultry diseases : but geese and ducks are immune.

**Eggs and poultry.**

Eggs and poultry at all times command high prices : eggs frequently cannot be bought at any price. Those who are fortunate with their poultry always can count upon a ready sale and remunerative returns.

**Small stock most satisfactory.**

I am convinced that, without very great care and attention, it is quite impossible to increase one's stock of poultry beyond a certain limit. Those who attempt it, invariably suffer. The wise man contents himself with keeping a few, tending them with care ; and he reaps [reasonable and by no means contemptible rewards. A man, who had farmed poultry on an extensive scale in America, told me that there he had

## LIVE STOCK

as many as 500 – 800 turkeys with an equal number of fowls: but that, in Africa, he failed to get more than 25 turkeys at any one time with about double the number of poultry. He said that invariably, when these numbers were increased, some pest or disease would empty his run. Consequently he had to be satisfied with a small and healthier lot. Another farmer told me that he found it remarkably beneficial to have a dark roosting place for poultry. He had built a special fowl-house, whence he could shut out light. His poultry went early to roost; and were not permitted to enter the run until well-on in the day. He had noted that poultry, which roosted in the trees round the house, were being disturbed continually and their sleep broken. Hence he devised a plan whereby, in a dark room, noises, the glaring morning sun, to say nothing of the bitterly cold night, could not possibly molest them; and he strongly asserted that, in his experience, unbroken rest resulted in more eggs and fuller flesh. I am bound to say that I deem this theory most ingenious and extremely rational; and I have no hesitation in recommending its general practice.

Visitors to South Africa cannot fail to note, especially in towns and villages, that the fowls seem to be awake all night. Cock-crow regularly takes place at about 11 p.m. A solo-bird begins: duets and trios and quartettes follow after; and the oratorio concludes with a chorus which, on quiet nights, can be heard for miles. And throughout the night, any disturbance of the fowls, leads them to supply encores lasting 5 – 10 minutes apiece. These phenomena, together with the skinny aspect and scarce egg of the South African fowl, lead me to reach the foregoing conclusion. And I will add that, when poultry farming is governed by scientific methods, which will ward-off disease and obviate present disadvantages, South Africa will become as suitable and as profitable a country as any other for the poultry-farmer.

**An  
experience.**

**A dark  
roost.**

**A Fowl  
Oratorio.**

**An opinion**



## Products of the Country

**I**T is difficult to estimate the quantity of cereals grown in South Africa, owing to the absence of any reliable statistics ; and, on the same account, it is still more difficult to calculate the yield of the various crops. The farmer's method is to measure the yield by the return of so-many-fold of the seed sown. Such a system of calculation is always indefinite, and is often misleading ; and the unfortunate result is that it is by no means easy (and, as a rule, impossible) to find out the actual cost of production.

**No statistics available.**

Wheat is grown chiefly in the Eastern and Western Provinces of Cape Colony, the Eastern district of Orange River Colony, in the neighbourhood of Potchefstroom, Rustenburg, Marico, Lydenburg, in the Transvaal, and in certain parts of Rhodesia and Natal.

**Wheat areas.**

The best wheat is grown under irrigation during the winter months : but the yield falls far short of that of more favourably situated countries. I was told by a practical farmer in South Africa, that an average yield of 7 bushels an acre was considered good. Now the English average is 30·9 bushels an acre ; and although it is true that many districts of the great wheat-exporting countries (Canada, Australia, America, and the Argentine) do not average more than 7 - 8 bushels an acre, still their general average is much higher. Furthermore, as all the wheat of these last countries is grown without artificial irrigation, the cost of production is diminished enormously.

**Yield.**

## SOUTH AFRICA

### **Rust and Mildew.**

Wheat, grown in dry land in any part of South Africa in the summer, is very liable to rust and mildew.

### **Mealies and Kaffir- corn.**

Mealies and Kaffir-corn grow in almost any soil. They are summer crops; and are grown extensively, especially by the natives. These last are gradually extending their scope of operations; and this denotes an augmented supply for the market when better means of transport becomes available. But, on the other hand, mealies and Kaffir-corn soon exhaust the soil; and there are few areas (apart from the alluvial) where more than three successive crops can be grown. The present custom, both for the white man and the Kaffir, is to move-on to new soil when the old becomes exhausted; and to return a few years later when it has recuperated (from the air) its lost constituents. Locusts, hailstorms, and excessive drought, are the only drawbacks with which the cultivator of mealies and Kaffir-corn has to contend.

### **Fluctuating prices.**

The price of mealies fluctuates considerably and altogether unreasonably. In travelling through the country after the War, I frequently had occasion to buy mealies. Wherever I went, I had no difficulty in getting them from the natives at any price between 7s. and 10s. a bag: but the storekeeper in the same district would charge me up to 45s. I actually paid 45s. at a store in the Haenertsburg in the Transvaal; and I immediately afterwards discovered that a transport-rider had bought 15 bags at 10s. a bag from the natives in the same place. One storekeeper, who did a large business in the Northern Transvaal, told me that he was accustomed to take bags of mealies from the natives in exchange for blankets, or some other Kaffir truck, worth 1s. or 1s. 6d. He also said that every native grew (on an average) ten bags of mealies more than he needed for the consumption of his own family; and that, if the natives got a better

### **Discrepant prices.**

## PRODUCTS OF THE COUNTRY

price and better means of transport, they would grow a great deal more mealies than could be disposed-of in the country. Although this does not explain the discrepancy alluded to above, it must be admitted that it is necessary for the storekeeper to pay low prices to the native, because he is perhaps 200 – 300 miles from the market, and transport-charges are very costly. The wives (or rather female slaves) of the natives cultivate most of the mealie lands. Sometimes old men and children help them. Many of the young men are at the mines, earning the few pounds necessary to enable them to join other able-bodied adults of their tribes, who live in bestial indolence in their kraals during nine months of each year. I have said that, if the natives are encouraged by better prices and better transport, a much larger quantity of mealies will be available for the market than at present. The men will not cultivate them, but they will see that their female slaves do not fail ; and, so long as female slavery is allowed, so long it will continue to exist : for the native sees no harm and no disgrace in it.

**Female  
slavery.**

Potatoes grow fairly well in most parts of the country, when the seasons are favourable : but, without irrigation, they cannot be grown successfully in many districts. In certain areas of the Transvaal, I saw potato-fields where the seedlings had been shrivelled by heat. In another place, where irrigation was practised, the potatoes appeared as though they had been boiled. These cases go to prove the difficulty of hitting the mean between the two extremes of natural dry heat and artificial moisture.

**Potatoes : a  
difficulty.**

The returns from potatoes, especially in the Eastern Province of Cape Colony, are very good : but it was impossible to find out the exact returns, because most of the farmers are not accustomed to keep accounts.

**Doubtful  
returns**

I visited a settlement near Pietersburg, where

## SOUTH AFRICA

- 50 – 60 acres had been planted. The officer in charge told me that he had set 300 tons, and that he intended to set more. I confess that I do not know what return one ought to expect from 50 – 60 acres in South Africa : but I should imagine, in this particular case, that it would amount to half the seed planted, and perhaps less. Two crops often are grown in one year, where irrigation is possible. Some of the potatoes are good-eating : but, as a rule, that floury quality, which is so much appreciated in this tuber, either is lost by bad cooking, or is not characteristic of the South African potato. The seeds are renewed every year. Home-grown potatoes do not answer very well for seed purposes ; and hence a large trade in seed-potatoes is done with England and Germany. These are imported in small boxes ; and they often arrive at their destination in a very unfit state for planting. One notable feature of the South African potato is its lack of keeping qualities. Many farmers are obliged to find a market for their potatoes within a few days of digging : otherwise they become soft and stringy.
- Qualities.**
- Wild Cotton.** Wild cotton grows luxuriantly in some parts of South Africa, more especially in Rhodesia. The natives use it for making cloth, shawls, etc. The material, as they make it, is rough in texture, but it is very durable. They dye it with various colours, which they extract from plants and shrubs in a primitive manner.
- Rhodesian Cotton.** The Rhodesian Administration is making experiments in the cultivation of Egyptian and American cotton. When I visited Rhodesia in April, 1903, the plants were in a healthy and vigorous condition. Cotton, as a product has so many advantages, not only as a fibre but also, as a fodder and a fertilizer ; and it should be a most remunerative crop to grow where land is obtainable at a small cost. The cotton industry has an exceedingly bright future.
- Fibre and Fodder and Fertilizer.**

## PRODUCTS OF THE COUNTRY

Tobacco is cultivated extensively in South Africa for home consumption. So far, the export trade has not been developed. Many varieties are grown. As the soil varies, so does the tobacco vary in quality and flavour. Most of the nitrogenous soils are adaptable to tobacco-culture. At present, the best soils are supposed to be in the Rustenburg district of the Transvaal; and tobacco, grown in the Magaliesberg Valley, is deemed the best. This tobacco is prepared by Messrs. Hartley, Bros., and others, who have made a special study of growing, curing, and manufacturing it in the most modern and scientific manner. Mr. Hartley told me that they had no difficulty in disposing of as much as they could manufacture: that it was the intention of his firm to develop the industry as much as possible; and that, but for the War and the consequent total destruction of their plant, they already would have made greater headway. I was told also that most of the soils were suitable for Tobacco-culture: but that the ordinary farmers did not pay sufficient attention to the curing of the leaf. The farmers, on whom Messrs. Hartley, Bros. depend for their supply, are the bright exceptions to this rule.

**Tobacco.**

**Suitable  
soils.**

**Messrs.  
Hartley,  
Bros.**

Much tobacco is grown in Cape Colony, Natal and Rhodesia. That which is produced in the Enkeldoorn District of Rhodesia is equal to any which is grown in the Transvaal: but it has not yet attained a similar public reputation.

**Tobacco  
districts.**

It is the antiquated method of growing and curing which is the chief hindrance to the tobacco industry. Most of the farmers know nothing of modern methods: they are slow in acquiring knowledge, satisfied with their well-worn groove, not particularly anxious to learn the better way. The Governments of the various colonies ought to take the matter in hand, and appoint experts to instruct the farmers in the best methods of growing and preparing *Nicotiana Tabacum* for export

**Antiquated  
methods.**

**Government  
intervention  
necessary.**



## SOUTH AFRICA

**Qualities of  
South  
African  
tobacco.**

trade. The present price of it is too high ; and the present quality of it is not sufficiently uniform : consequently it cannot be expected to find remunerative markets in Europe or elsewhere, till these defects are remedied. While in South Africa, the smoker appreciates the flavour of South African tobacco. It has one advantage to the heavy smoker : owing to the absence of saltpetre from its preparation, it can be smoked all day without any ill-effect ; and it never burns the tongue. My own experience was that, when no other tobacco was obtainable (as often was the case during the War) one acquired a taste for it ; and presently preferred it to tobacco of English manufacture. I must add, however, that, after I left South Africa, it did not seem to retain the flavour which had been its recommendation. Near the coast, it certainly became moist, clogging the bottom of the pipe with an earthy kind of composition.

**Dr. Sucks-  
land's experi-  
ments.**

Dr. Sucksland, a German scientist, has put-forth the theory that the flavour of tobacco is due to microbes which impregnate the herb. After various experiments, he proves that the aroma of Virginia Tobacco is caused by a microbe peculiar to Virginia ; and that the sweet aroma of a Havaña also is due to useful and obliging microbes peculiar to Cuba. His experiments in impregnating foreign tobacco with Virginian microbes succeeded in imparting to the same the peculiar Virginian flavour. He extracted the microbes from fermenting Havaña leaves and replaced them with German microbes, causing the Havaña to possess the putor usually associated with German tobacco. If Dr. Sucksland's theory should prove to be of universal application, there ought to be no difficulty about the future of South African tobacco. Acquired tastes are not much admired in these days, when everyone is in a frantic hurry and has no time for leisurely acquisition. The essential flavour of South African tobacco, which

## PRODUCTS OF THE COUNTRY

is an acquired taste, can be exchanged quite easily for the fashionable flavour of Virginia or Havaña, by the simple process of importing the Havaña and Virginia microbes to South Africa, where all microbes vigorously flourish. Therefore, South Africa tobacco yet may rule the market.

At present tobacco-growing is one of the most profitable industries, in districts where there is sufficient demand at a fair price, and where the climate and soil are favourable. These last are the most important factors in Tobacco-culture. Judging from many expert opinions on South African conditions, I see no reason why vast areas should not be profitably cultivated and a superior brand of tobacco produced. But this special culture requires a thorough knowledge of soils, manures, species of the herb, and of the methods of planting, cultivating, drying, and curing. When these problems fully are mastered, there is no reason why the South African leaf should not obtain an enormous vogue throughout the Empire.

**The future  
of tobacco  
culture.**

Neglect of the industry of forestry must be included in the category of sins of omission on the part of the governments of the defunct Boer republics. Near the towns some good work in this direction has been accomplished by individual enterprize: but the farmers' homesteads boast only of a few trees, which help to denote the situation on the lonely veld. In many parts of these colonies, all that can be seen is the Australian Blue-Gum, and a few wretched specimens of peach-trees.

**Boer neglect  
of Forestry.**

There are no forests here. Large areas are covered with shrubs and stunted trees, which are useless except for firewood. Both in the Transvaal and in the Orange River Colony, natives and settlers have been permitted to exterminate all trees of any value. No attempt at re-afforestation has been made, except in a few districts where Messrs. Lewis and Marks have done some very

**Transvaal  
Treelessness.**

## SOUTH AFRICA

good work in a successful manner. The plantations in the vicinity of Johannesburg prove that the country is most suitable for trees. A few years' growth is astonishing. In six or eight years, common trees (such as the Australian Blue-Gum) attain an enormous height. Certainly this timber is not valuable: but the trees are useful for shade and shelter from the dusty winds.

### **Cape Forestry Department.**

The Cape Colonial Government has an established Forestry Department, which has done and is doing excellent work. According to the official *Handbook*, the indigenous- and heavy-timber area of Cape Colony comprises about 550 sq. miles. This area is being extended. Knysna, on the coast, is the largest forest area: next comes the Amatola mountain in the Eastern Province; and there are patches of forest in Griqualand East.

### **Natal Forestry Department.**

Natal also has a Forest Department, and an area of about 300 sq. miles of indigenous forests. Many large areas are being planted with Black Wattle (*Acacia mimosa*) which has become a source of considerable revenue to the Colony: the bark being much in demand, on account of its containing a very large percentage of tannin.

### **Rhodesia's Forests.**

Rhodesia has large and valuable forests, which are guarded carefully from the destructive instincts of the natives. In Matabeleland alone, Rhodesia possesses forests which have an area of about 2,000 sq. miles. The great teak-forest in the northern part of Matabeleland is quite unique; and there are also some other forests at Gwelo and Selukwe, where mapani, mangwe, and stinkwood grow well. This last timber also grows in Natal and Cape Colony.

### **Teak.**

### **Scrub Forests.**

South Africa abounds in scrub-forests, such as addo-bush, doornboom, and other thorny bushes of little value except for shade and firewood. Not only natives but white men are clearing the country of its trees and

## PRODUCTS OF THE COUNTRY

shrubs and bushes. I noted whole districts which, at one time, were covered with trees, but are now as bare as an egg. The demand for firewood is great ; and trees are sacrificed wholesale. There is little or no inclination to consider the future of the country or of its population. Sufficient Unto the Day is the Timber Thereof, is the motto of the arboricide. It has become a sort of second nature with most farmers to cut down every stick of timber on their holdings ; and to ride it into the nearest town for sale as fuel.

**Arboreal  
habits.**

Most of the South African soils are suitable for trees. The seasons, wet in summer and dry in winter, also are suitable to all trees except fruit-trees. Land which is exhausted by cereals, never is exhausted by trees. On the other hand, trees undoubtedly add fertility to the soil, by carpeting it with leaves containing constituents of fertility extracted, not from it but, from the air. I discussed the possibilities, of successful agriculture in South Africa, with a man who was extremely sanguine about its prospects. He was amazed, when I said that the soil was poor except in alluvial pockets ; and he pointed to some rows of trees, which had been planted a few years before, and were flourishing luxuriantly, remarking that none but a fertile soil could produce such trees.

**Suitable  
soils.**

**A fatuous  
fallacy.**

The fact is that (given a suitable soil) a tree requires little more from the surface of the globe than a foothold—enough penetrable soil through which to thrust its tender enzymes or ferments, which latter will pierce and pulverise granite. When as much as that is granted, the tree derives one-fourth of its sustenance from the rain and the atmosphere. Hence I conclude that there are very few places in South Africa which are unsuitable for trees.

The afforestation of sterile districts, and the re-afforestation of districts which have been deprived of trees, are matters which need a great deal more

**Afforestation  
and re-  
afforestation  
necessary.**

## SOUTH AFRICA

than the consideration of private individuals or limited companies. It is the duty of the Governments of South Africa to emulate the example set by Cape Colony and Natal, and to create properly equipped Forest Departments. The vast areas, which offer little or no scope for agriculture, pasturage or mining, will afford a splendid field for forestry. And any judicious outlay combined with systematic and expert effort in this direction, not only would serve important national interests but would justify itself by direct financial returns.

**Rubber-vine  
and tree.**

From a commercial point of view, the most important fruticose product is the rubber-vine and the rubber-tree. The former is found in abundance along the streams in the northern districts of South Africa, especially in the northern provinces of Rhodesia. It is a creeper, which clings to and winds round other trees for support. The natives extract the rubber by an incision made in the rind. The ground-rubber is a root, verisimilar to the rubber-vine : it grows under a small shrub. In order to extract the rubber, the root is beaten-up and boiled. The natives use the most indiscriminate and reprehensible methods of digging, tearing-up acres of land and ruining the young roots. The greatest rubber-industry is west of R. Zambesi, where a large native-trade is carried-on.

**Ground  
rubber.**

**Destructive  
native  
methods.**

**Present  
Neglect of  
dairy farm-  
ing.**

Adequate attention has not been given to dairy-work in South Africa. The Cape Government is making an effort to educate the farmers in this important industry : but the results so far are not satisfactory. The late Free State Government, some years ago, appointed an expert to demonstrate in a practical manner the art and mystery of butter-making. Very good results ensued. In Cape Colony there are two or three creameries : their progress is slow, but not unsatisfactory. I found the creamery at Queens-town fully equipped with modern utensils and appli-

## PRODUCTS OF THE COUNTRY

ances. Mr. Hodge, the owner, was very sanguine of success ; and already had secured customers in the towns for all the butter which he could produce.

Many years will elapse before the South African farmer becomes convinced that his antiquated and imperfect method is not the right one. Until a few years ago, the dairy-man (who lived 30 – 40 miles from a town) had little or no encouragement : but, now that the demand is greater and marketing-facilities are improved, an expansion of this branch of farm-work is warranted.

**Obsolete  
methods.**

Certain people have a predilection for a certain brand of wine or tea or tobacco : not necessarily for the best brand, but (from long use) they have acquired a taste for the article, and will have no other. The acquired taste is a singular thing. It has led men to flavour their viands with assafoetida and Limburger-cheese ; and there are hundreds of Boer wives who each will swear by her own make of butter. In all South Africa, there is no uniform quality of butter. As every system of making it differs, so does the butter itself differ in colour, flavour, and purity. Yet use has begotten a taste ; and the palate refuses butter, even better butter, to which it is unaccustomed.

**Acquired  
taste.**

I remember having to outspan at a farm-house in the Transvaal. The only available water was in a stagnant dam, green, and muddy : even when it was boiled, it still retained its green and muddy colour with an emphatically peculiar flavour. The butter, which the farmer brought to me, had the same peculiar flavour ; and was quite uneatable. Anon, the farmer inquired how I liked the butter ; and, before I could answer, he began to praise it as the best butter in the country, saying also that he and his family could eat no other. I call this an “acquired taste” : for the butter was indescribably filthy, as well it might be, seeing that the milk was tainted, the milch-kine having

**An  
experience.**

**Filthy butter.**

## SOUTH AFRICA

**A stagnant dam.** no other water save that of the stagnant dam, in which cattle, horses, and pigs, remained for hours every day, staling and messing.

**Denmark and Normandy.** In Denmark and Normandy, and other countries where butter-making has reached a scientific pitch of perfection, milch-kine can drink only the water which is provided in clean pails. Also, they all are tethered ; and are allowed to graze only that grass which will produce the best butter. Hence the superiority of Danish butter in the English market of to-day.

**United Kingdom.** But one need not go as far as South Africa for examples of the disgusting practice to which I have alluded. Many farms in the United Kingdom have a stagnant pool beside the shedding ; and it is not uncommon to see milch-kine (on being let-out in the winter-mornings, after 12 and more hours munching of dry hay), rush to the stagnant pool to quench their thirst. There are many farmers who, owing to such practice, are unable to find a market for their butter.

**Necessity of pure water, and of better cows.** Unless the farmers of South Africa realize the necessity of providing pure water for their cattle, travelling dairies and dairy experts can do little to develop the dairy-industry. Also, a better breed of milch kine must be selected and formed. If these two points receive attention, lessons in butter-making will be very useful ; and then the industry will flourish on its own merits. For the country and its conditions are suitable for dairy work.

**Uniform quality essential.** The South African farmer can blame no one but himself for his inability to oust the foreigner from the South African butter-market. He must learn the art of producing a butter of uniform quality. It stands to reason that, as every farmer's wife has a different system, the quality of the product vacillates between indifferent and bad ; and it is not likely that a miscellaneously flavoured butter will take the place

## PRODUCTS OF THE COUNTRY

of that of uniform quality which is imported in large quantities. The South African consumer has acquired a taste for foreign butter, which can be procured of identical quality throughout the country and throughout the year. It is not likely that he will discard certainty for the uncertainty (generally disagreeable and often revolting) of the home-made butter.

But, when the scientific dairy-farmer takes the industry in hand, and when some system is adopted for grading and distributing butter of uniform quality all the year round, only then will South Africa regain her market, and develop one of her most promising industries. As things are, Boer butter is generally used for greasing waggon wheels in the country : or for very inferior cooking in the towns.

In this connection I will mention that Rhodesia appears to offer more favourable opportunities to the dairy farmer than the other colonies. The grass is succulent : the water is pure and plentiful ; and the prices of land I shall set forth in the succeeding chapter.

**Scientific  
dairy work  
will regain  
the market.**

**Rhodesia  
for dairy-  
farming.**





## Land Tenure and Land Value

**T**HE terms and conditions upon which land is hired or leased in most of the South African colonies, are not based upon any established Land-Laws. The rule is a perfectly primitive method of procedure. The owner and the hirer make their own terms : the former gets as much as he can get for his land, and betrays little or no interest in the state of the said land before the termination of the tenancy : while the hirer gives as little as he can give for the land, and takes from it all that he can take during his tenancy. If once you make the farmers feel that they have no secure interest (beyond its annual produce) in the land which they occupy you will have poisoned husbandry at its very root.

**Absence of  
Land-Laws**

This system places a premium on bad farming. The land is exhausted rapidly ; and must be abandoned to the recuperative action of Nature for several years. Consequently, improvement in buildings, fencings, and general farming, is not thought-of. It is no matter for surprise that, under this system of tenure, the tenant-class (which consists chiefly of *bijwoners*) should be the poorest class of whites in the country. South Africa has its Poor Whites Problem ; and swarms with a class of squatters who are in many ways worse off than the Kaffirs. Just and fair Land-Laws would have encouraged this class to improve their holdings and their own position. As things are, they are generally mere tenants-at-will. Some are subject

**a premium  
on bad  
farming.**

**No security  
of tenure.**

## SOUTH AFRICA

**No interest  
in holdings.**

to a month's notice : while others have barely a day to pack-up their belongings and be-off elsewhere. The houses which they inhabit on such conditions, better can be imagined than described. Having no security of tenure, they have no permanent interest in their holdings ; and I may say that I failed to see that (at common-law in South Africa) the tenant-farmer has any right whatever to compensation for any improvement or work of husbandry. On the contrary, he at all times is liable to have his improvements confiscated, or to be extra-rented on them by an unscrupulous land-owner. Certain farming customs, which have become established by common consent, are observed : but they are of a varying character. They are concerned chiefly with water-rights, fencing, commonage, etc.

**Ownership  
the best  
system.**

The best and simplest system of tenure undoubtedly is that of absolute ownership of the land which a man occupies. The personal interest of the absolute owner is that his land shall become as valuable as he can make it. The interest of a company, or of an absentee-landlord, is merely that the rent shall be as high as possible.

**Freedom of  
purchase  
must be  
encouraged.**

In a country like South Africa, which has millions of acres awaiting development, the utmost freedom of purchase by farmers ought to be encouraged in every possible manner. All authorities (on the wealth of nations) pronounce this principle the most beneficial to a nation.

**Tenants'  
real  
grievance.**

In South Africa, the absence of prescriptive custom and just Land-Legislation has marked a wide distinction between the land-owning farmers and the tenant-at-will farmers. The real grievance is, not that the tenants have lost the value of their improvements (for few, if any, ever were made) but, that liability to such loss generally prevents them from making such improvements as would be profitable to themselves and to the country at large.

## LAND TENURE AND LAND VALUES

When a man holds a farm at a rent which is less than the full value of the land, (whether the lowness of such rent be due (a) to the improvements made by the tenant with his own capital, skill, or energy, or (b) to a general rise in land-value caused by the enhanced prosperity of the country,) that man, enjoying the reasonable and fair security of his tenure, knows that he has a property which he either may enjoy himself, or may transfer to a nominee for a consideration. A farmer, who has improved his farm, will find no difficulty in disposing of his tenant-rights; but a tenant-at-will finds it more to his interest to leave his farm in a worse condition than that in which he found it. There is no injustice in a law, which secures to the farmer due compensation for such improvements made by him as are of equal value to his successor. On the contrary, it is thoroughly just: because it is most beneficial to the tenant and the landlord, as well as to the country.

**Compensation for improvement must be given.**

Some English tenant-farmers formerly were very much at the mercy of unscrupulous landlords; but since the *Agricultural Holdings Act of 1851*, the Land-legislation of England gradually has been improved. Customs of compensation to tenants on quitting their farms grew up little by little. Many of these subsequently became embodied in Acts of Parliament; and were made compulsory. The principles of the *Agricultural Holdings Act of 1875* were that the basis, on which a tenant could lay claim to compensation, was his actual outlay on improvement: that such improvement would be deemed exhausted after a certain number of years, the amount of compensation (to which the tenant was entitled) decreasing yearly, until such time as it was thought that the improvement had become exhausted and that the tenant himself had recouped the expenditure which he had made. In theory, this *Act* was all that could be desired: but, in

**English conditions.**

## SOUTH AFRICA

**Agricultural  
Holdings  
Act, 1883.**

practice, it was found that its permissive clauses rendered it useless ; and it was repealed by the *Act of 1883*, which made compensation for improvements compulsory, and was itself amended by the *Act of 1900*. The principles of the *1875 Act* based the amount of compensation on the outlay. The *1883 Act* based the amount of compensation on what might fairly represent the value of the improvement to the incoming tenant, thus entirely doing away with the scale laid-down in the *1875 Act*. The *1900 Act* follows much the same principle as the *1883 Act* : but divers items are added (Schedule I.) to the list of improvements for which a tenant may claim compensation.

**Not suitable  
for South  
Africa.**

**An opinion  
as to what  
is wanted.**

Having sketched a rough outline of the general principles of the various Land-Laws of England, I will add that I do not deem it possible or practical to advocate the same Land-Laws for South Africa at the present time. I do consider, nevertheless, that legislation of some kind is absolutely necessary for the welfare of a country teeming with a white population, which is more suited to a rural life than to any other, but which is without means to buy land : for, under the present system of tenure, no great inclination is shewn to adopt an occupation which discourages thrift, enterprize, and energy. The miner's spade is the Aaron's Rod which devours all others. South Africa is rich in minerals and precious stones ; and greater attention is naturally paid to mineral values. When more attention is paid to the agricultural and pastoral industries (—the only permanent industries —) then the hirer of land will enjoy, or at least ought to enjoy, an agreement embodying the principles of the three Fs, *viz.*, Fixity of Tenure, Fair Rent, and Free Sale.

**The  
Three Fs.  
Size of Farms.**

South Africa is essentially a stock country. The quality and quantity of the grass necessitate large farms. From ten to twenty acres of land are required

## LAND TENURE AND LAND VALUES

to carry a single head of cattle, summer and winter ; and from one to two acres are needed for each sheep. In England one acre of good grazing land carries one head of cattle or four sheep.

There are three kinds of farms :—(a) farms under 1,000 acres : (b) farms of about 3,000 acres : (c) farms of 6,000 acres and upward. Where the veld is poor, a farm of 40,000 acres is not uncommon. But the majority of farms contain about 3,000 acres.

**Three kinds of Farms.**

The question of large and small farms in South Africa is being discussed continually, as though the prosperity of the country were bound-up in it. On the one hand, it is contended that the division of large farms into small would be most beneficial : because such division would create a class of farmers who would be their own labourers and overseers. On the other hand, it is contended that larger farms (than those which at present exist) would induce men of greater knowledge and capital to take up farming as an occupation. "You may admire a large farm : but you should cultivate a small one," says Columella. It is also true that a small farm cultivated is more fruitful than a large farm neglected.

**Question of large farms or small.**

To create a class of peasant-proprietors is difficult : to keep them in that condition is still more difficult. Men in South Africa will go whithersoever their interests lead them ; and very few of them would be content to see their best interest in perpetual peasant-proprietorship.

**Peasant proprietorship.**

It is the nature of the land itself which has been, and will be, the chief factor in determining whether farms shall be large or small, pastoral or agricultural. Land which will carry only one beast to 20 acres, must be farmed on a large scale : for 1,000 of such acres is equal to no more than 50 acres in England. A farmer (a stock-farmer especially), who only had a 50-acre farm in England, would be a very small

**Nature of land must determine size of farm.**

## SOUTH AFRICA

farmer ; and a South African farmer, who only had a 1,000-acre farm would be his equal. There is the reason, and the only reason, why the Boers are not satisfied with less than 3,000 acres. They cannot live on less — until the soil and the climate and the markets completely are transformed.

**Compulsory  
uniformity  
denounced.**

It cannot be said to be an evil that large farms, or that small farms, should preponderate : but a compulsory law, enforcing the creation of farms of equal size, would have disastrous results. People, who propound the theories which are being propounded in South Africa, can have paid no attention to the experience of centuries, which teaches that where the law has endeavoured to make the extreme the rule (i.e. large holdings, or small) it signally has failed ; and that when the balance of affairs is upset, it is no easy matter to put it back again. The size of South African farms ought to be settled by those who know the soil and conditions of the country. It is a matter for agricultural and pastoral experts ; not for earnest philanthropists or political faddists. Is it conceivable that South African mine-owners would submit to a law which divided their mines, and assigned to each mine, (say) ten stamps, or twenty stamps, and no more ? No. Then let the agricultural and pastoral industries be dealt-with as intelligently as the mining industry.

**System of  
ownership.**

**The Roman-  
Dutch Law.**

According to the principles of the Roman-Dutch Law, the Boers, who are lords of the family possessions, hold the same in trust for their children. The Boer's children are co-proprietors with him ; and the landed property cannot be parted without the consent of all the members of the family. The law of primogeniture has no supporters in South Africa, being directly at variance with those principles of equality which were the recognized laws of all primitive communities. Consequently, the eldest son of a Boer is

## LAND TENURE AND LAND VALUES

in no different position to the youngest. The theory and practice of the Boer is that every member of the family should own land, no matter how small an area. The term "landlord" is extremely offensive to these people. They like to be the masters of the soil on which they live; and they have the greatest possible aversion from being tenants.

Having observed the effect of the Boer principle of equality when carried into practice, I am obliged to express my disapproval of it. The system of dividing and sub-dividing farms is a short-sighted system: for, at the third or fourth generation, it becomes an absurdity. I already have stated that farms of less than 3,000 acres are not very desirable holdings; and it must be obvious to all (save those who will not see) that the division of a 3,000-acre farm into 10 or 12 portions, and the sub-division of each of these portions into say ten or twelve sub-portions, has a tendency to bring the farming class into a state of abject hopeless poverty. The temporary owner has little or no encouragement to make improvements, extensive or otherwise: he knows that, when the farm is divided, the homestead will be much too large and too expensive to maintain when only a tenth or a twelfth of the land belongs to it. And, as for tenant farming, the Boer system is simply fatal to it; for no tenant would care to settle-down on a farm which will be split-up into fragments on its owner's death.

The argument, in favour of the law of primogeniture as it exists in England, is very strong. English tenant-farmers know that the estate will remain intact, whoever may become the owner of it. Primogeniture makes for confidence among the tenantry of England. The heir to a large landed estate, trained from his youth to make himself worthy of his position, is fortified by the knowledge of the confidence reposed in him to discharge his duties to the best of his abilities. As

**Failure of  
Boer system.**

**Division.**

**Sub-division.**

**The Law of  
Primogeni-  
ture.**



## SOUTH AFRICA

a rule, he is a keen farmer. He keeps a good stock of animals, by which his tenants benefit. He takes an intelligent and substantial interest in village, school, church, local boards, etc. He possesses influence, which is often of great service to the tenantry and to all whose chief he is. He has the means to keep-up the family establishment in the country where he has so large a stake. Rural England would be a blank without her landed gentry. No other country in the world has produced such a concrete embodiment of what the Romans called "Virtus"—the sum of all corporeal and mental excellencies of man. But then other countries have not the law of primogeniture.

**South Africa  
wants  
squires.**

**Voertrek-  
kers'  
degenerate  
descendants.**

**Heavily  
mortgaged  
farms.**

**Family feuds.**

In many of the rural districts of South Africa, there is no one who, by birth and education and financial position, is capable of taking the lead in local matters, —who can afford to smile at parochial frowns and favours. The present tendency is therefore to level-down, not to raise-up, — to grind-down individuality and genius to match the average. The descendants of the old Voertrekkers are in a far humbler and poorer position to-day than their forefathers ever were ; and, not only that, but the old brave spirit of the pioneer is sadly to seek. The division of the land at the father's death is generally the cause of long family feuds ; and "a house divided against itself cannot stand." Yet the transfer or sale of land is exceedingly easy throughout the country, except in cases where several interests have to be considered. The transfer-fees are reasonable and the transfer-deed is as simple as A B C : but considering that most of the farms were a free gift to the original owner, it is astounding to see how heavily they are mortgaged at the present time. In the division of farms it was formerly the custom to appeal to Ex-president Kruger, when the family were unable to agree. It is said that two brothers once made such an appeal. And Oom Paul answered them saying, "I

## LAND TENURE AND LAND VALUES

ye both will accept my decision, I will settle the matter for you." And the contending brothers promised to accept His Honour's decision. And Oom Paul answered them yet again, saying, "Thou, Jan, art the elder ; and to thee is it given to divide the land. Go therefore, and divide it into two parts ; and put up beacons as the manner is. But thou, Andries, art the younger ; and, when thine elder brother shall have divided the land, to thee is given to choose which portion thou wilt take for thine own share, whether this or that." And behold it was so.

**Solomon II.**

It is the custom for Boers' sons to leave their fathers' farms ; and to take up their abode with their wives' parents. If they do not get, or inherit, a farm of their own before their fathers-in-law die, they settle down on those portions which their wives inherit. A wretched hovel is erected here ; and from wretchedness to wretchedness is the slow but steady and certain trend of the rural inhabitants of Boer colonies. Sub-division was a matter of convenience. Poverty and ignorance have made it a matter of necessity and justice. Farmers possess nothing but their farms. They cannot provide for their children in any other way. At least they think so : for they know of no other way of living, except on the land.

**Boer custom.**

**Wretched-  
ness to  
wretched-  
ness.**

Hence, it is the duty of the Governments of South Africa to shew another and a better way : first, by intelligent legislation : secondly, by encouragement to individual enterprise : thirdly, and chiefly, by the example which is better than precept. This is part of " the white man's burden," which the white man has not shirked as yet.

**The white  
man's  
burden.**

It is most difficult to determine what may be the intrinsic value of agricultural and pastoral land in South Africa, and how such value is to be estimated in any particular case. The course adopted in England, where all factors can be estimated, is to find out the

**Land-Value.**

## SOUTH AFRICA

**English  
methods.**

production per acre, or the quantity of stock which the farm will carry. The cost of production is calculated and the market-value of stock and produce averaged. The difference between the two (i.e. cost of production and market value of produce) represents the profit which is apportioned to the tenant for his skill, his labour, and his capital. The balance is regarded as the sum payable yearly to the owner as rent. Such rent capitalised at so much per cent., represents the value of the farm.

**Silence of  
Handbook  
for Settlers.**

For estimation of value, this rule cannot yet be applied in South Africa. The factors cannot be calculated. Quantity of produce per acre and cost of production, the stock-carrying capacity of the veld in various districts, — these are (shall I say negligible) factors upon which even the Experts employed in the compilation of the *Transvaal Handbook for Settlers* are significantly silent. The Boers keep no farming accounts; and their mode, of calculating the yield at so-many-fold of the seed sown, is indefinite and often misleading.

**Boer  
methods  
useless.**

**No valid  
mode of  
valuing.**

There is at present no valid mode of valuing an agricultural or pastoral farm. The purchaser or tenant has to make a fortuitous guess at the sum which he should offer. The past history of the farm rarely is known; and it is not surprising that estimates should be formed on happy-go-lucky surmises.

**Inflation of  
land-prices.**

Except in Rhodesia and Bechuanaland, all South African land is greatly inflated in price. The causes are twofold :—

- (a) the activity of the mineral-speculator and the company-promoter :
- (b) the facts that the Governments of the Transvaal and Orange River Colony have been buying land for settlements at extremely high prices.

The present prices of farms do not justify purchase.

## LAND TENURE AND LAND VALUES

The fashion in mineral values has a strange influence upon farm-prices. Farms in the Transvaal command higher prices than neighbouring farms in the adjoining colonies. A river, a fence, or even an imaginary line, may make a substantial difference in the relative values demanded for two adjacent farms. A farm, which is situate in the Transvaal, is apparently (by virtue of the sole fact of position) a better gambling counter than one situate elsewhere.

**Present prices do not justify purchase.**

In fact the pecuniary value of a farm has no relation to its agricultural or pastoral value. It is concerned with something altogether different, something indefinable, fictitious, speculative. But, as the positive and undeniable need for agricultural expansion grows, there is bound to be a constantly increasing tendency towards the free sale of surface rights as distinct from mineral-rights. The following table of values, taken at random in the various South African Colonies, will give an approximate idea of the present value of land in the respective colonies.

**Free sale of surface rights apart from mineral rights.**

### CAPE COLONY.

Albany	.	.	medium price of dry land	35/-	an acre
Albert	.	.	" " " "	30/-	" "
Alexander	.	.	" " " "	17/6	" "
Barkly East	.	.	" " " "	70/-	" "
Beaufort West	.	.	" " " "	5/-	" "
Bedford	.	.	" " " "	30/-	" "
Cathcart	.	.	" " " "	20/-	" "
Ceres	.	.	" " " "	30/-	" "
Cradock	.	.	" " " "	100/-	" "
Fort Beaufort	.	.	" " " "	30/-	" "
Humansdorp	.	.	" " " "	40/-	" "
Knysna	.	.	" " " "	15/-	" "
Outshorn	.	.	" " " "	15/-	" "
Tarka	.	.	" " " "	40/-	" "
Uniondale	.	.	" " " "	40/-	" "

Irrigated land, £5-£100 an acre.

(N.B.—These are average prices taken from *Cape Colony for Settlers* (Mr. A. R. E. Burton, F.R.G.S.), issued by the Cape Government.—O.T.)

*Average Price* of medium land in Cape Colony, 28/- an acre.

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### ORANGE RIVER COLONY.

Best land	50/-	an ac
Government purchase for Land-settlement :		
average	25/-	" "
Inferior land	15/-	" "
<i>Average Price of land in Orange River Colony, 28 3/4</i>		
acre.		

### NATAL.

Best land	50/-	an ac
Medium land	25/-	" "
Poor land	10/-	" "
Natal Land and Colonization Company	18/-	" "
<i>Average Price of land in Natal, 25/- an acre.</i>		

### TRANSVAAL.

*(I have selected prices of farms in the Transvaal which men might be expected to make a living. There are so many farms, which command a price of £15-£30 an acre, consequence of their proximity to the mineral area, and there are other farms in unhealthy districts which can be bought for 5/- to 10/- an acre. But neither of these classes of farms are suitable for settlers.—O. T.)*

Lichtenburg	medium dry land	20/-	an ac
Standerton	" " "	21/-	" "
Pretoria	" " "	50/-	" "
Pietersburg	" " "	15/-	" "
Rustenburg	" " "	40/-	" "
Heidelberg	" " "	30/-	" "
Potchefstroom	" " "	50/-	" "
Klerksdorp	" " "	30/-	" "
Lydenburg	" " "	20/-	" "
Waterberg	" " "	10/-	" "
Government purchase for Land-settlement :			
average		25/-	" "
<i>Average Price of medium land in the Transvaal, 28/6</i>			
acre.			

### RHODESIA.

Enkeldoorn District : Farm on offer : good soil and water supply, suitable for agriculture and stock raising.

## LAND TENURE AND LAND VALUES

- farming. Price asked for 3,000 acres, 2/6 an acre.  
**Enkeidoorn District:** Farm on offer: well watered, good pasturage. Price asked for 3,000 acres, 1/8 an acre.  
**Bulawayo District:** 3 Farms on offer: four miles from railway. Price asked for 18,000 acres, 3/4 an acre.  
**Bubi District:** 2 Farms on offer: well-watered 25 miles from railway. Price asked for 6,000 acres, 1/8 an acre.  
**Salisbury District:** Good Farm on offer: 18 miles N.W. of Salisbury, well-watered by the Gwebi River. Price asked for 4,600 acres, 1/7 an acre.  
**Victoria District:** 2 Good Farms on offer: situate adjacent to the township of Victoria. Price asked for 9,000 acres, 2/- an acre.  
**Umtali District:** 2 Good Farms on offer: well-watered, excellent pasturage. Price asked for 9,000 acres, 2/2 an acre.

*Average Price of good farms in Rhodesia 2/1 an acre. (The above prices are taken at random from a list of farms now in the market. The price asked may be considered as being fully 10% above the price which would be accepted.—O. T.)*

In addition to the foregoing, these two facts are necessary to a right understanding of this matter.

1. The Rhodesian Government is offering land to settlers at 9d. an acre.

2. The Rhodesian Exploration and Development Company is offering free grants of 2,000 acres on R. Shangani on the following terms:—Payment of an annual quit-rent of 10s.; and, after five years, a transfer of the freehold will be given free. (*All these farms are excellent for grazing purposes.—O. T.*)

## SOUTH AFRICA

If we omit the Free Grants (quoted above) and the Government offer of land at 9*d.* an acre, the *AVERAGE PRICE of good farms in RHODESIA works out at 2/1 an acre.*

This, in comparison with the prices in the other colonies, holds out infinitely better prospects for the settler, as may be seen from the appended table of average prices :—<sup>1</sup>

Cape Colony	.	.	.	33/-	an acre
Orange River Colony	.	.	.	33/4	" "
Natal	.	.	.	25/-	" "
Transvaal	.	.	.	28/6	" "
Rhodesia	.	.	.	2/1	" "

I have compared the various soils, the various grasses, the relative positions of farms in connection with railways and sea-ports. It appears that the difference mainly consists in the price (not in the quality) of the land.

Before the War, Rhodesia had the late Boer republics as her political neighbours. They were armed to the teeth. Since the Peace of 1902, however, Rhodesia is isolated no longer. She is connected with the sea-port of Beira by railway ; and she has also a through railway from Cape Town. Consequently her position is improved enormously. She now commands all the South African markets and has facilities for the export of surplus products.

Without wishing to prophesy, I must say that, in view of the foregoing facts, it will not surprise me to see land-values in Rhodesia trebled within the next twenty years.

(<sup>1</sup>) The average prices in the Transvaal and Orange River Colony were estimated immediately after the declaration of peace in 1902. They are now (1904) much lower.

## System of Farming

**I**T is easy (but it is not always safe or desirable) to condemn the South African farmer's system. Comparisons sometimes are drawn between the methods of the English farmer and those of the South African, to the detriment of the latter.

**"Comparisons are odious."**

Little reliance ought to be placed on opinions hastily formed by inexperienced travellers, from hasty generalizations, often in accordance with foregone conclusions, which, just as often contradict each other. If anyone will take the trouble to study the elementary principles of South African farming together with the natural conditions which govern its practice, it will be seen that many of the new theories, which lately have been advanced, are opposed diametrically to the experience gained by many years' cultivation of the soil in a climate which, to the inexperienced, is faultless but, to the expert, the cause of his greatest anxiety and often the means of his greatest loss. "Experience is a good school : but the fees are generally very high."

**Inexpert opinions.**

**New theories futile.**

It is certain, however, that the South African farmer might obtain more advantage for himself, his farm, his country, by being more progressive. So many husbandmen seem to have settled-down on their farms, trusting to the enormous areas of land which they hold, and the kindness of nature, to do everything for them ; and regarding the soil as being inexhaustible, requiring only an occasional rest to recoup its lost fertility.

**Unprogressive farmers.**



## SOUTH AFRICA

**Lack of  
inquisitive-  
ness.**

There is a lack of inquisitiveness among South African farmers. They do not attempt to realize the actual relation of the animal-kingdom to the vegetable-kingdom, and the dependence of both upon the soil. They have gained experience of a kind, which undoubtedly is of value to them : but it is the rule-of-thumb principle which guides them, not the scientific, accurate, and sure. They know which is the best soil for producing a certain crop ; and they know the best kind of grass for stock : but they do not know why these things are so. They know that, at certain times of the year, this or that grass is unsuitable, but they have not taken the trouble to enquire into the cause. They know that a certain soil will produce a certain crop ; and that certain stock will thrive on certain grasses and not on others : but they are ignorant of the constituents of the soil, which make it bear a crop when another soil will not do so ; and they are ignorant of the substance whose presence makes some grasses nutritious, and whose absence leaves other grasses innutritious. In short, they are well able to recognize effects : but they do not know the causes which produce the effects. Consequently, being ignorant of the causes, they are unable to govern them ; and, therefore, they are unable to produce desired effects at will. Their system of farming is based on certain experience ; and experience gained in one district often is of little value in another. These men, on the whole, live comfortably : their experience (such as it is) is valuable and absolutely necessary : but a little more investigation would enable them to become masters of the system which as yet is in its infancy. Vergil recognised the value of this inquisitiveness as long ago as the days of Caesar Augustus.

**Ignorant of  
causes.**

“ Before we plough a field [he says] to which we are  
“ strangers, we must be careful to attain a knowledge  
“ of the winds, from what point they blow at par-  
“ ticular seasons, and when and from whence they are

## SYSTEM OF FARMING

"most violent : the nature of the climate, which (in  
"different places) is very different : the customs of  
"our forefathers, and the customs of the country : the  
"qualities of the different soils, and what the crops  
"are which each country and climate produces and  
"rejects." (1)

Those who have not had many years' experience of farming in South Africa ought not to condemn the existent system out of hand. It should be examined carefully. An attempt should be made to find out the true reason of what is called routine on a farm, or of the general customs of the farmers of the country. It sometimes happens that these reasons are accidental or meaningless : but it often happens that the everyday practice of farmers rests on a knowledge of facts, not scientifically known but, intuitively perceived, or inherited. To condemn what perhaps might be deemed merely local prejudice would be premature ; and often might mean disaster.

**Investigation  
necessary.**

The system, of alternately exhausting and resting the soil, certainly has proved fatal in many parts of South Africa, e.g. the Orange River Colony and the Western Province of Cape Colony. Some lands, which have been so treated, have ceased to produce crops : others, which used to grow five or six crops in succession, now produce only one crop of wheat and possibly one of oats. The cropping period gradually is getting shorter ; and the resting period is longer : because the soil now is exhausted more quickly than when it was in its virgin state. I noted many crops which appeared to be dwarfed ; and this reaction of the soil against the cultivator, who has borrowed and not repaid its vitality, clearly condemns the system. It damages the cultivator himself : for his crops diminish year by year ; and his labour-bill sooner or later inevitably will exceed the value of such crops as an impoverished exhausted soil can produce.

**Condemna-  
tion of  
alternate  
exhausting  
and resting.**

(1) P. Vergilius Maro, *Georg.* I. 150, *et seq.*

## SOUTH AFRICA

### **Necessity of instruction.**

It would benefit South Africa if every farmer could have cheap and easy access to means of ascertaining, by chemical analysis, the constituents of his soil. I saw one farmer putting a costly artificial manure on land which, judging from rocks underlying it and vegetation which grew upon it, was charged fully (if not excessively) with the very ingredients which he was adding to it. An analysis of this soil, proved this to be the case. An erroneous notion is afloat to the effect

### **Artificial manures.**

that artificial manure is a "cure-all." Some of the more intelligent farmers told me that, having tried artificial manures with unsatisfactory results, they had lost all faith in them. This caused me no surprise : for the total absence of any compulsory and authoritative guarantee of quality, on behalf of the maker or agent of artificial manures, enables any unscrupulous person to palm-off absolutely worthless rubbish on the unsuspecting farmer. In England, we long ago found out the necessity of passing very stringent laws in connection with all fertilizers. Such laws are imperatively necessary now in South Africa ; and people who evade their clauses ought to be mulcted in very heavy penalties. Baron Liebig says that all soils contain a maximum of one or several nutritive substances ; and that it is by the minimum that the crops are governed, be it lime, potash, nitrogen, or any other constituent. When the South African farmer's methods really are systematized, and embrace a knowledge of the constituents of the soil which are necessary to produce certain crops, he will be spared many disappointments and losses.

### **Guarantee and legislation needed.**

### **Seed.**

The subject of seed receives insufficient attention from South African farmers, many of whom will accept an inferior quality of seed if it works-out at a shilling or so less an acre than the superior quality. It should be remembered that the best seed obtainable is never too good, and that price alone is no criterion of value.

## SYSTEM OF FARMING

Shape, colour, smell, weight, purity, and germinating capability, all require careful investigation. The farmer would find it greatly to his interest to invest half-a-crown or so in a low-power pocket microscopic lens (the Codrington), which would assist him greatly in detecting inferior seed. The practice, of mixing old seeds with new, is very common in South Africa: this often will account for a crop's failure which, otherwise, would be ascribed to climatic conditions. But, when all is said and done, there really is only one infallible test for seed; and that is by trial of germinating capability in properly prepared trial-beds. The Governments of South Africa might render great assistance to farmers by the establishment of institutions like the Aynsome Laboratory of Grange-over-Sands, which is under the management of Professor J. Stewart Remington.

**Only  
infallible  
test.**

Under the present unsatisfactory circumstances, the best way of employing Kaffir labour on the land is embodied in the system generally used by the South African farmers. The arrangement is that the Kaffir, in addition to a small monthly wage, is allowed to have a proportionate interest in the farm, a few cattle, sheep, and goats, and a small patch of arable land for cultivation. This system ensures, within certain limits, the best and certainly the most permanent labour of the lazy and unreliable Kaffir. The best farm-workers in the country are Italians: the next best are the Coolies; and, generally speaking, the Kaffir is a bad third.

**Kaffir  
labour.**

**A bad third.**

South African farmers have only a few implements of husbandry, and little knowledge of manipulating them. It is generally the Kaffir who has the handling of them; and, his intelligence being of a most meagre kind, many good and useful tools are cast aside for something of more primitive construction, which he can manage without undue mental exertion. I was

**Paucity of  
implements.**

## SOUTH AFRICA

- Neglect of implements.** astonished to see what little care was bestowed upon farming implements, after their actual period of use was over. Most farmers leave them exposed on the lonely veld, where a growth of weeds covers them till the following season. It would puzzle any but the practised eye of the man accustomed to the veld to detect implements thus concealed by vegetation and rust. Needless to say that, as no attempt is made to house and clean these implements at the end of the season, the depreciation in their value and usefulness is very great.
- Consequent depreciation.**
- Implements.** The waggon with its span of oxen is an institution as necessary to the South African farmer as his dwelling-house. He takes some pride in his "turn-out," which, with a cape-cart, a few ploughs, and a home-made harrow, represents his implements of husbandry. His system is singularly imperfect : but it suits him. He lives : he is happy : he is content : I sometimes
- A sad sight.** was saddened by the sight of a holding of a few acres occupied by a strong healthy man with a wife and perhaps a dozen children : only one-third of the holding under cultivation, and that often of a wretched kind : two-thirds undergoing a long rest after over-cropping :
- Strong man idle.** the entire holding smothered with weeds : the man idly looking-on between the time of planting mealies, pumpkins, and potatoes, doing perhaps a little digging to day, and a little weeding the-day-after-to-morrow, only a few days' labour in all, from planting time to harvest. Ignorance is the cause of such idleness.
- Ignorance.** The man adopts a system which is in accordance with the routine followed by his larger neighbours. While imitating them, he is inferior to them : because he has less land, less capital, fewer tools, less scope for energy. Consequently he is very much worse-off.
- Indifference.** But he slouches along life's road, apathetic, indifferent, utterly without proper pride in the appearance of his place, utterly oblivious of the well-being of his

## SYSTEM OF FARMING

family. Until this kind of farmer is taught, he hardly can adopt a better system : for he has no opportunity of learning by experience or observation. He makes a living of a kind now, simply because he has the advantage of his personal expenses being inconsiderable. But he is doing irretrievable damage to South Africa. His system takes no consideration of the necessity for keeping-up the fertility of the soil : on the contrary, it exhausts and sterilizes it by merciless over-cropping.

**The ruin of  
the land.**

The general practice throughout the country is to grow crop after crop of the same species, till the soil will produce no more. Then, the only remedy adopted is to allow the land to rest. A rotation of crops would be more beneficial, for the simple reason that different crops feed on different ingredients of the soil ; and, thus, recuperation is effected simultaneously with production. For example, turnips take a great deal more potash from the soil than wheat : oats and barley take a much greater quantity of the silica from the soil than wheat : root-crops feed mainly on phosphoric acid and potash : lucerne on lime.

**General  
practice.**

**Rotation  
recom-  
mended.**

It is no uncommon thing to see farmers sowing lucerne in land which has not a trace of lime in it. Naturally they feel aggrieved when they fail to get a crop. "It grew well in other districts," some say. "The altitude was too high or too low," others explain. And again, others ascribe their failure to unfavourable weather. Ignorance causes them all to miss the point. I myself noted lucerne growing luxuriantly in all altitudes where the soil contained lime in its natural state or artificially applied. It especially flourishes under irrigation, where from five to six crops a year were obtained, averaging one ton an acre a cutting ; and, in some districts, such as Outshorn and Graaf Renet, much heavier crops were carried. One farmer, a new-comer was sowing lucerne on dry land at the end

**Attempting  
the  
impossible.**

**Five to six  
crops a year.**

## SOUTH AFRICA

**A new-comer's error of judgment.**

of the rainy season. I questioned him on the matter ; and stated my opinion that lucerne, sown on such land at that time of year, could give but very poor results. His reply was that it was the custom in New Zealand to sow lucerne at all times of the year ! In New Zealand, be it noted, the rain-fall amounts to 60 - 80 inches a year, and is evenly distributed : in this particular district, the average rain-fall is 21 inches in four months with eight dry months to follow. Now no Boer, and indeed no one with experience of the country, would do so very vain a thing as to sow seed after the rainy season was over.

**Fruit-farmers praised.**

**Rhodes' beneficent foresight.**

The fruit-farmers perhaps are the most progressive class. Some of them conduct operations on an entirely scientific system. The late Cecil Rhodes laid out some excellent fruit-farms ; and employed experts to manage them. The neighbouring fruit-farmers have profited by the invaluable example and experience here exhibited, — which no doubt was precisely what the great and prescient mind of Cecil Rhodes intended.

**Exceptions to the rule.**

**Leaven.**

**Nucleus.**

**Future exceptions to the rule.**

Before concluding this general condemnation of the system at present governing the agriculture of South Africa, it is my duty to state that I have not omitted to note certain farmers (scattered here and there throughout the country), who till their land and manage their stock on scientific principles, which enable them to surmount the many obstacles to progress : while their intelligence and energy have succeeded in constructing a system which improves, not only their own position but also, the soil which they cultivate. Thus I am led to pronounce the present condition of husbandry in South Africa as being not altogether hopeless. There is a leaven which is working, — there is the nucleus of a scientific system in existence ; and, in time, the ignorance, idleness, and mismanagement, which are the rule, will become the exception.

## Agriculture *vs.* Stock-Farming

**A** REVIEW of the agricultural prospects of South Africa would be unfruitful, if it did not consider the conditions of those vital questions which briefly may be summed-up in the time-worn expression "Supply and Demand."

**The case for  
Agriculture.**

To make the matter plain, a somewhat rough comparison may be suggested. The premier position of the Transvaal Gold-Industry is due to the fact that, throughout the gold-mining area — some 40 miles in length — the precious metal is distributed with such regularity as to make it possible to estimate (with wonderful accuracy) the amount of gold contained in any given mine. In Australia and America, where the same industry is concerned with the exploitation of quartz-reefs (which contain scattered pockets), gold-mining is a highly speculative undertaking. The Transvaal Gold-Industry is the first of its kind in the world. In respect of agriculture, however, the position of South Africa as compared with that of Australia and America is precisely reversed.

**Comparison  
between  
Gold Mining  
and  
Agriculture.**

The soil of Australia and America has a more uniformly high value throughout all the wide areas which they present for treatment by the agriculturist: while the soil of South Africa, in so far as it possesses any element of reproductive power and economic value, exists only in pockets. Therefore, it is unreasonable to count upon South Africa as being likely to make a bid for export-trade. Existent conditions

**Comparison  
between  
African and  
Foreign soils.**



## SOUTH AFRICA

are against her. The market for agricultural produce is defined by the demand of local consumers. But it is a very serious question, and pregnant with significance, whether the South African farmer would be able in the future to supply even the local demand at lower prices than those which satisfy his foreign rival.

### **Foreign advantages.**

The foreign producer farms virgin soil of great fertility. He employs superior labour, and cheaper labour; and his climate is more suitable for cereals. He works larger areas, which can be treated by the most modern implements of husbandry. He is a wholesale manufacturer of agricultural produce. He is privileged by ocean-rates for the whole distance, which do not exceed the ordinary railway-rates for the same tonnage for a distance of 300-400 miles on the South African railways. Therefore the foreign producer is distant from the South African Market only in the abstract sense of the word "space": for in effect he is competing side by side with the South African farmer.

### **England vs. Foreign Competition.**

England, by bitter experience, has learned what really is meant by competition with Australian and American agriculture. The English farmer aforetime was the most scientific and successful wheat-grower in the world. He farmed the best possible soil, in the best possible manner, with the best possible results. Now, in many instances, he has been compelled to abandon his farm: because it no longer could be made to grow wheat, which was able to compete in price with foreign wheat. In the Eastern Counties, many farms completely were exhausted in the attempt to grow wheat at low prices; and, to-day they are neglected, and may be rented for a nominal sum. The English scientific farmer, with cheap and skilled labour, and a suitable soil and climate, failed in competition with Australia and America. The South African farmer enters a similar competition, under

### **South Africa handicapped.**

## AGRICULTURE *vs.* STOCK-FARMING

even more crushing disadvantages. He is handicapped by dear land, poor soil, unreliable and unskilled labour, expensive transport, drought, locusts, and other modern variations of all the plagues of Egypt. On the face of it, it is unreasonable to expect him to succeed, where the English farmer has failed, not only with regard to wheat but also to most cereals.

The late Boer Government was a government of farmers by farmers for farmers. It encountered foreign produce with prohibitive tariffs. Sooner or later it will be found necessary to adopt the policy of the free importation of food-stuffs. The tendency presumably will be toward still cheaper ocean-rates, and toward greater facilities and lower rates from coast to market. It will be wholly favourable to the foreign competitor, and wholly detrimental to the local producer. The South African consumer will buy the best and the cheapest commodity which is offered to him. Not even sentiment will bar the procession, toward successful supremacy, of the foreign producer.

There are several markets for farm-produce in South Africa : but the chief one at present is Johannesburg. Let me for a moment assume that the foreign seller will not thrust his wares rudely upon the notice of the local buyer ; and that the South African farmer is not to be harried by foreign competition. What, after all, does the local consumer want to buy ? What, after all, is the length of his purse ? His chief wants are mealies, wheat, oat-hay, potatoes, forage, vegetables. Now, the South African farmer is prevented, by the nature of the soil, from creating an export trade. He cannot grow enough for that. But, for the local demand, he can grow too much. The laws of political economy do not make exceptions, in order to ensure success of the political schemes of agricultural settlements artificially set up in the country. Therefore, there will be a tendency for the price, of produce offered in

**Inevitable  
supremacy  
of foreign  
produce.**

**South  
African  
markets.**

## SOUTH AFRICA

Johannesburg and other market-centres of South Africa, to fall below the cost of production.

**A comparison.**

To forestall those who may be moved to cavil at the foregoing blunt pessimism, I will institute a comparison by way of justification. The present white population of Johannesburg, the leading market of South Africa—roughly may be estimated at 100,000. Before the South African Campaign, the total white population of the Transvaal was estimated at about 150,000, comparable (let us say) to that of a small English town like Bolton with its 168,000 inhabitants ; — for, when all is said and done, Bolton is a somewhat insignificant little town in England, and plays a very unimportant part in determining the English prices of farm-produce. Again, the total white population of Cape Colony, Natal, Orange River Colony, Transvaal, and Rhodesia together, is not more than 800,000, comparable (let us say) to that of Liverpool. Further, a small county like Cheshire, with an area of only 644,143 acres, carries a population of 792,913 persons ; but yet Cheshire's demand for agricultural produce does not tend to affect the price of the same to any marked extent. And, it also must be borne in mind that, of the total white population of South Africa (to say nothing of the natives), a very large proportion already are producers, and not exclusively consumers, of farm-produce.

**Analysis of Johannesburg produce-market.**

It was interesting and instructive to analyze the state of the local produce-market before the War. The prices, ruling in September 1899 in Johannesburg and Pretoria, furnish much material for comment. For instance, there can be no doubt about the demand of Johannesburg for vegetables ; and yet the supply of this item often exceeded the demand. It was then no uncommon thing to purchase, in the open market, a sackful of assorted vegetables for one or two shillings. My own investigations were made a few months after

## AGRICULTURE *vs.* STOCK-FARMING

the conclusion of the Campaign. Only a small proportion of the Boers had returned to their farms. Few of them had had time or opportunity to raise produce for the market. Yet, at such a time and under such circumstances as these, vegetables of all descriptions were sold at prices which must have been below the cost of production. There are seasons in Africa, as in other countries, when certain vegetables and fruit cannot be produced. It therefore often happens that exceptionally late or early produce realizes abnormal prices. It is at such times that people, who do not understand the conditions under which the late or early produce was grown, complain of high prices.

I spent a whole month in studying the question of the supply and demand of the Johannesburg produce-market: because the market is the key-note of the farmer's prospects: but, the more I studied the conditions of this leading market, so much the more did I become convinced that South Africa presented no favourable prospects to the agriculturist handicapped by the high price of land and labour. The market-master of Johannesburg informed me that, at the time of my visit, the farmers were selling their produce at less than the cost of transport, to say nothing of the cost of production. The latter, therefore, was a free gift made by the necessitous farmer to the independent buyer. He affirmed that it was a common thing to see farmers diving into their pockets to get money (in addition to that which they had received for their stuff) in order to pay for transport. It should be remembered that, for months after the Peace of 1902, many farmers had no waggons of their own; and were obliged to hire.

I discussed the condition of the Johannesburg produce-market with one of the members of a gold-mining firm in that vicinity. Like most men in South Africa who are connected with the remunerative gold-industry, he

**Produce sold  
at less than  
cost of  
transport.**

**A gold-mine  
owner  
astonished**

## SOUTH AFRICA

habitually regarded all other industries through the gold-spectacles of the Rand ; and he could not realize the facts, in connection with demand and prices of farm-produce in Johannesburg, which I laid before him. In order to convince him, I told him that, if he would send his servant with a full-sized sack to the next day's market, I would undertake to buy for a crown an assortment of vegetables which the servant would not be able to carry home. My offer was accepted. In the morning, I took Mr. Freeman of the Johannesburg Stock-Exchange with me to the market. We got a full-sized sack, and the strongest native whom we could select. As all the produce was being sold by auction in small lots, I was obliged to follow the salesman from one stall to another. I bought twelve huge vegetable-marrows for 6*d.* : a large bundle of carrots, 6*d.* : ditto, onions, 6*d.* : three cabbages, 6*d.* : twenty-four bundles of beet-root, 6*d.* : eighteen bundles of radishes, 3*d.* : bundle of lettuce, 6*d.* : twelve cucumbers, 6*d.* : turnips, 6*d.* : sundries, 6*d.* Total, 4*s.* 9*d.* The sack had to be sewn-up ; and, as the stalwart native was quite unable to carry it, it was taken home on a trolley. My friend had its contents valued by his cook, who stated that the retail price usually paid for that quantity of vegetables would amount to £1 11*s.* 6*d.*

**A day in  
the market.**

On the 28th of January, 1903, I specially noted every movement of the Johannesburg produce-market. Supply was very much in excess of demand. A large quantity of produce could not be sold even at a sacrifice. I was accompanied by Mr. A. Tomaselli, an Italian vegetable-farmer and one of the only two commission-agents in the market. The information, which he gave me, was extremely pertinent. He had been in business for eleven years. He had as good a soil for vegetable-farming as anyone in the Transvaal. Before the War, he had sold potatoes on the Johannesburg market at

**Experiences  
of Mr. A.  
Tomaselli.**

## AGRICULTURE *vs.* STOCK-FARMING

2s. 6d. a sack of 160 lbs., and as high as £3 a sack. But he said that, when the price was high, farmers had no potatoes to sell, because their crops had failed in the manner common in the country. In times like these, farmers were obliged to buy for their own use. Naturally, therefore, prices soared-up into the empyrean. Mr. Tomaselli also stated an opinion to the effect that, if as many as 300 bags of potatoes a day were to be placed on the market at the present price of 17s. a bag for three consecutive days, they would have to be sold at 5s. a bag on the third day. Interrogated concerning future prospects, Mr. Tomaselli responded that there were no people in Johannesburg to buy green-stuff in large quantities: that the prospect was as black as possible: that another month would see things given away or left to rot on the ground. "We are near that now," he said, pointing to a whole bag of beautiful beet-root which a salesman was offering at 2s. 6d.; and which found no buyer. We proceeded to follow the salesman. The next commodity was 300 bundles of rhubarb. The first three bundles were sold for 1s.: but not a single buyer could be found for the two hundred and ninety-seven remaining. About a hundred cabbages in good condition realised 10s. There was no buyer for fresh well-grown radishes, though the salesman asked 1s. for as large a quantity of them as a man could carry. Twelve vegetable-marrows, weighing about 3 lbs. each, sold for 1s.; and there were no buyers for any more. Savoy, equal to the best sold in the London market, fetched 3d. each: green peas, 2s. a hamper of about 25 lbs.: turnips, 1d. a bunch (but a whole bagful offered at 2s. 6d., found no buyer); carrots, 1d. a bunch. Five cases of home-grown tomatoes sold at 14s. to 10s. for about a hundred lbs. The next offer was 9s., and the lot was withdrawn. Forage of good quality, 11s., 10s., 7s., a hundred lbs. Potatoes went from 17s.

**A black  
prospect.**

**Auction-  
prices.**

## SOUTH AFRICA

to 10s. a bag. A few weeks later, a farmer from the Middelburg district sold all his potatoes for 7s. 6d. a bag, a price which hardly paid the high cost of transport and the market charges. One of the largest farmers in Cape Colony once sold a quantity of potatoes for 30s. a bag. Finding the speculation likely to be profitable, he increased the production the following year and had 10,000 bags to sell : but he was obliged to sell them at 3s. 6d. a bag. Mr. Freeman, to whom I already have referred, told me of a friend of his who bought a Scots cart-load of carrots for his horses in Johannesburg at 1s. 6d. a load. The quality of all these vegetables was invariably good : but I never have been to a market where green-stuff sold at the prices which ruled in the chief market of South Africa on the 28th of January, 1903.

**Absurd  
optimism.**

I frequently was told that the population of South Africa would double, as the mines developed. I have no doubt but that, in five years' time, there will be an augmented demand for food-stuffs. Meanwhile, I am restrained, by the dictates of common sense, from urging the farmer to produce agricultural commodities which are of a perishable nature.

**Present  
scope of  
agriculture.**

Whatever may be the ultimate number of the industrial population, there is at present no great scope for agriculture in South Africa. The local demand for agricultural produce can be said to have its limits. Any extension of these likely to occur in the near future, easily can be measured and as easily met. Let the Recalcitrant Optimist visit the Johannesburg produce-market any day between 7 a.m. and 10 a.m. ; and he will experience a simple object-lesson. But he must not distort the meaning of what he sees, by a divagation to the prices obtained by the middle-man : for these generally are 200% to 600% in excess of the prices actually obtained by the grower.

It is a favourite device to point to statistical returns

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of the imports of farm-produce. The argument is a simple one. "That which now is imported may be grown by the energetic farmer." "South Africa must feed itself." "The measure of imports is the measure of the farmer's opportunity." And so on ; and so forth.

**Optimists' arguments.**

The *Handbook for Settlers* (recently issued by the Land Settlement Experts employed by the Transvaal Government) places the value of now-imported farm-produce, which could be raised in the Transvaal, at £3,000,000. This estimate includes manufactured and unmanufactured timber, £347,000 ; manufactured and unmanufactured leather, £346,000 ; biscuits, £28,000. I confess that, in the whole course of my careful and systematic investigation of South Africa, I have not yet seen the class of farmers who are able to turn their present holdings and the appurtenances thereof into cabinet-making, saddlery, or biscuit manufactories. The habits of a life-time and the absence of the necessary technical instruction, appear to me to preclude the possibility of such versatile proceedings ; and I fear that few farmers will be found who are in a position to produce the imports named above. But the same Experts continue to bleat as follows :—

**A pernicious book.**

"This is sufficient to indicate the market that is likely to prevail for farm-produce of every description, when the normal conditions that existed prior to the war are again reached. There appears to be no reason why in the near future the agriculturists of the new colonies should not only supply their own local markets and perhaps share those of the neighbouring states who are large importers of foreign produce, but it is probable that products for which the country is specially adapted will find the European markets available. It is of course impossible to grasp the extent of the markets in the future as population increases but, as to the present with which we are chiefly concerned, a great demand already exists for all that the countryman can produce and every capable settler may profit by the opportunities that are offered to him."



## SOUTH AFRICA

**A demonstration.** Now these inaccurate conclusions were drawn from totally erroneous premisses, at the very time when I was visiting the Johannesburg produce-market, as described above. If the governmental Expert, who is responsible for so culpable a deviation from fact, had taken the trouble accurately to investigate particulars, concisely to gauge the relation of supply to demand (as he might have done on the proper spot any day), he never could have stated such conclusively and universally misleading fallacies.

**Notable fluctuation.** Facts are facts ; and only fools refuse to face them. The importation of grain into Cape Colony and Natal, and the exportation of the same from Orange River Colony, exhibit extreme and notable fluctuation. Cape Colony was obliged to import grain and flour in

1883	to the value of	£449,000.
1885	" " " "	£245,000.
1889	" " " "	£29,000.
1890	" " " "	£231,000.
1894	" " " "	£116,000.
1898	" " " "	£1,000,000.

Natal was obliged to import grain and flour in

1894	to the value of	£20,000.
1896	" " " "	£312,000.
1898	" " " "	£118,000.

The Orange River Colony exported grain in

1896	to the value of	£143,000.
1898	" " " "	£40,000.

Such extreme fluctuation in an old Colony like the Cape clearly displays the uncertainty of the crops. Cape Colony has some of the best agricultural land and most scientific farmers in South Africa. Its rainfall is comparatively regular, its climate is comparatively favourable. Beside the enormous area of wheat-lands in the Western Province, there are 3,000,000 acres under irrigation ; and yet, in spite of these

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advantages, no reliance can be placed upon the crops. Drought, locusts, hail-storms, rust, make it impossible to forecast the character, in quantity and quality, of the harvests ; and the uncertainty of return, not only baffles the farmer's calculations, but steadily saps at his moral fibre.

Suppose (for the purpose of the argument) that the demand for farm-produce in South Africa is unlimited. Suppose that the South African farmer's difficulty, (as well as the English farmer's difficulty,) is confined to a struggle with the foreign competitor. What then would the South African agriculturist's prospects be ?

**Hypotheses.**

The basis of the economic arguments, for or against such prospects, is the natural differentiation of the world's surface. Physical configuration, geological formation, and climate, jointly produce a soil which varies in capability all over the world. Whatever else man can do, (and he can do very much indeed,) he cannot neutralise the results of natural terrestrial conditions. He cannot turn to economic advantage a soil which is naturally poor. He cannot correct a climate which is fickle and unpropitious. *He cannot fight geography.*

**The farmer cannot fight geography.**

To affirm that South Africa cannot produce certain cereals at a profit, would be as misleading as the absurdities contained in the *Handbook for Settlers* ; but to say that, in the production of cereals, South Africa can compete with other countries would be entirely erroneous. Wheat-production in South Africa so far has been bolstered up by tariffs and excessive railway-rates. Farmers' governments have been the rule, with the result that home-grown cereals have been protected against those of the foreigner.

**Cereals.**

The matter of producing wheat and other cereals in South Africa, on the same scale and (if possible) at the same cost as in Australia, has been considered fully by the legislature of Cape Colony. Two agricultural

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**Experience  
of agri-  
cultural  
experts sent  
by Cape  
Colony to  
Australia.**

experts were deputed to visit Australia, for the purpose of investigating the system and conditions of the Australian farmer. Mr. Walter Hulse, the largest and perhaps the most experienced farmer in Cape Colony, together with Mr. A. J. Viser, manager of the Government Experimental Farm at Stellenbosch, spent several months travelling in Australia. Their *Report*, which was a lengthy one, exhaustive, interesting, and most instructive, was presented to both Houses of Parliament in Cape Town. The first paragraph says :—

**South Africa  
distanced  
from the  
start.**

“ We had pictured Australia generally as a land of drought and sandy plains, with a narrow coastal fringe of fertile land. We fully expected to find the Cape had equal physical advantages, and that the circumstances, of our annually importing from them bread-stuffs to the value of on an average four thousand pounds' worth, would be found to arise from the progressiveness of the Australian and the supineness of the Cape Colonial. Our preconceived ideas were wrong, we much regret ; and our first glimpse of the country revealed the sad truth that, in an agricultural race, we should be distanced from the start. Having travelled over 10,000 miles of agricultural land, and talked cereals to infinity, we were of the same opinion, i.e. that especially in wheat production,—unless the handicap were a heavy one, we should not compete. To make it clearer, a careful study of the map of Cape Colony will shew what a fractional proportion, certainly not more than  $\frac{1}{100}$ th part, could be put under wheat with a prospect of getting remunerative returns, say four out of five years, without irrigation : whereas Victoria, consisting of 56,000,000 acres, could practically be converted into one vast field of luxuriant wheat. Mr. Marshall the most noted and successful rust-resistant wheat-grower in Australia, informed the commissioners that he never had irrigated an acre of wheat in his life ; and he did not see how it could be grown artificially-wetted at anything approaching the price of unwetted wheat. He considered the wheat-farmer of Australia a poor man, as a rule poorer than his labourers.”

In summing up, Messrs. Hulse and Viser, after taking infinite trouble and pains, say :—

“ Having travelled over more than 10,000 miles of Australian soil, and having had every opportunity of talking

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"to the farmer and holding his plough, we perhaps not unnaturally feel some right to speak with authority on the cost of wheat-production in Australia in contrast with the cost in Cape Colony. It is with deep regret that we re-iterate our conviction that wheat cannot be produced in Cape Colony nearly as cheaply as in Australia. This, we state in spite of the dicta of theorists, whose knowledge of what they do not understand is based on the perusal of some statistical register. It is absurd and fallacious reasoning that because Australia (which has twenty inches of rain) produces 10 bushels of wheat to the acre and sells at 2s. 6d. per bushel, the Cape farmer is held up to ridicule because he can't or won't do likewise. We have at some length pointed out that we found Australia less subject to climatic and other drawbacks than the Cape; that the rain (though generally not heavy) fell in the autumn, winter, and spring, leaving the harvesting season dry; that hundreds of sq. miles of stone-less soil in one stretch could all be put under wheat: and that the land could all be rented from 3d. an acre upwards. We also shewed that the Australian would not know a locust from a lizard; and, finally, that he considered harvest as a natural sequence of planting: whereas, in this Colony, the chances are equally divided between a crop and a failure and a harvest. To expect to compete on level terms with the great wheat-producing territories of Canada, North America, Argentine, or Australia, is madness."

**To compete  
is madness.**

Mr. Bourdillon, an authority on agriculture in the Orange River Colony, in a pamphlet issued by the present Government of that Colony, states that:—

**Opinion of  
Mr. Bour-  
dillon.**

"There is no doubt that the prospect for farming here in the O.R.C. is good: but, in saying this, I have also to admit that the country is one of great trials and disappointments. The crops are looking splendid—a flight of locusts turns up and clears everything, leaving the land as brown as fallow ground. A twelve months' drought sweeps away the earnings of 3 or 4 previous years. The chief drawbacks to agriculture in this division<sup>(1)</sup> are droughts, which however are never so severe as in other parts—and the other extreme of semi-tropical torrents of rain. There is no doubt that the fact of the rainy season being contemporary with the reaping season is a great draw-back.

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<sup>1</sup>(Conquered territory): the best agricultural district in South Africa.

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"In the low-lying lands, reapers are sometimes caught by sudden storms which render them in an hour or more quite inaccessible: while corn has been known to sprout in the standing ear. . . . Since I forwarded the original articles for publication in the *Times*, I have seen several papers, on the prospects and possibilities of this Colony, by men who have been through the country on military service. It has struck me that generally much of the criticism has been made without due consideration of the abnormal state of the country, and with only a superficial knowledge of its climate and natural conditions. The fact, of large tracts of good soil remaining uncultivated, is generally severely criticised. A much larger area of these flats is ploughed for mealies and Kaffir-corn than used to be the case; and it is probable that something more may be done in this way; but, that those tracts outside the district before designated as suitable for wheat-lands can be profitably cultivated, is a mistaken impression. Once in every 12 or 15 years, in all probability, the whole country (if prepared), could be ploughed, and would produce an almost incredible amount of grain; on the other hand there would be many years, when the ground would be so dry and hard, that a plough could not enter the soil; and some years would produce no crop, even after the seed was in the ground; and I am sure the general average would not be a remunerative one. Even if the economic problem, of how to keep together the hands, cattle, and implements, for a supreme effort, could be solved, it would be impossible to foretell when a good year is to fall."

**Soil  
exhausted.**

That cereals of a kind can be grown on dry or irrigated lands in South Africa is unquestionable. But it must not be forgotten that the land, which has been growing cereals in the past, considerably has deteriorated in the cereal-districts of Cape Colony and the Orange River Colony, as well as in other parts of the country, where continual cultivation has been carried on without manuring the land. I noted large areas in the best wheat-district of Cape Colony which, owing to their exhausted state, could not be expected to return the seed put into them. The same may be said of some of the best wheat-lands of the Orange River Colony. Thaba Pacha (for example), is a district which thoroughly has been exhausted by successive and excessive

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cropping ; and, consequently, it is now abandoned. Mr. Bourdillon, in his pamphlet, says :

“Though there have been wonderful returns in the past, “the older lands have latterly had to be given up.”

The exhaustion of the natural fertility of all South African soils undoubtedly is a serious matter. To predict the future of Agriculture, fostered by the State and protected by high tariffs, would be to find the answer to a question which is pregnant with both political and economic gravity. From the gold-mine-owners' point of view it may be a sound business-principle to extract, from the rich reefs of South Africa, all the gold which they contain in as short a time as possible. When, however, it comes to a systematic effort at forcing cereals from the soil—the country's only permanent source of wealth—without adequate means of recouping the said soil of its lost constituents, such a policy is, not only extremely unpractical but, suicidal in that it saps at the only perdurable asset possessed by South Africa. A useful comparison may be made between the present exhausted soils of South Africa and the exhausted soils of those territories which, centuries ago, served as the granaries of the Roman Empire, the desert-sands of Northern Africa and Asia Minor, the sterile slopes of Sicily. But it is not necessary to go abroad for exhausted soils. Thousands of acres may be seen in the eastern counties of England, exhausted by continuous cropping, and now abandoned. And the North American farmer, who formerly grew wheat in abundance in the eastern states of America, now can grow no more. “Trekking West” is as a household word with agriculturists, who (having exhausted the soil), move onward to the virgin soil which can be cultivated without manure.

**A comparison.**

As for the gold-mining industry of South Africa, there is no blinking the fact that the country is living

**Living on capital.**

## SOUTH AFRICA

on its capital, and not on the interest thereof. The same might have been said of the landlords in the eastern counties of England, who lived on the high rents of farms which were forced to grow wheat in the days of high wheat-prices ; and who now draw low rents, or no rents at all, from land which is exhausted and unproductive. Under protective tariffs, and excessive railway-rates from coast to interior, cereals only can be grown profitably in South Africa at the expense of the soil. No margin is left for refertilization. Thus, as well as the gold-mining industry, the farming industry draws on the capital of the country. In a matter of this kind, not a short view but a long view must be taken : not the view of a generation, but of generations.

**A deadly practice.**

The deadly practice, of transforming the land into wheat-land, fortunately was arrested in England by the low price of wheat. Farmers, therefore, were compelled to turn their energies toward stock-farming. Thus the land is given a chance of recuperation. Every sane agriculturist must know the fatuity of attempting to grow cereals, for export or for home-consumption, unless there be stock on the farm or means of getting manure. Otherwise very few years suffice to exhaust the soil's vitality, which ages of rest will not always renew. The South African farmer adopts the obsolete English system of alternate cropping and resting. The English farmer long ago realised that the necessary resting-period gradually became much longer than the cropping period. Then science suggested alternate cropping and manuring. But artificial manure does not cure the soil : it merely prolongs the agony and delays the final syncope. Deterioration proceeds more slowly : but it does proceed. Artificial manures contain but few of the substances needed for plant nutrition ; and are applicable only to those crops which require more of a

**Artificial manure a palliative, not a cure.**

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certain ingredient than the soil can give. Farmyard-manure, on the other hand, is a general manure ; and contains most of the constituents required by ordinary crops. Artificial manures are quicker in their action than farmyard manure. They at times are useful as auxiliaries to the latter : but, when exclusively used, they ultimately would exhaust the soil of a sub-tropical country like South Africa. They perhaps might act for a few seasons : but they would be as the whip and spur to a tired horse, making him gallop a few furlongs and drop dead before the mile. When, however, the soil has its natural covering of grass ; and when that is eaten down by stock, the fertility (if not increased) certainly is maintained.

**Value of  
farmyard  
manure.**

Suppose that the demand for farm-produce, the fertility of the soil, and the means of maintaining that fertility, were all favourable to the South African farmer. Would it be advisable (from an economic point of view) for him to grow cereals ?

**Hypothesis.**

Let it be taken for granted that the South African farmer can grow cereals at a cost of 25 % more than the Australian farmer : but that he can raise stock at the same cost as (or possibly less than that of) any other farmer in the world. Then, in spite of the fact that the tariff on imported cereals makes it possible to grow them at a small profit, would it not be more profitable to give up cereals altogether, and to go-in wholly for stock-raising ? The advantages of the latter course are obvious. The farmer's energy would be concentrated on the industry which shews the greatest return : his purchasing power would be increased : his land would maintain (and probably increase) its fertility : his capital would not be reduced, but profitably employed : protective tariffs on the food-stuffs of the people could be abolished (and cheap food would mean cheap labour for developing the country's mineral wealth and other industries) :

**Advantages  
of Stock-  
farming.**



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imported meat no longer would be required ; and the community at large would benefit by having good wholesome fresh unfrozen home-grown meat—in short, the farmer would rise from his present status, of robber of the soil and employer of useless labour, to that of custodian of his country's most valuable asset, his country's benefactor, and his own best friend. All this comes within the scope of the South African farmer, if he will confine himself to and study every detail of one industry, growing just sufficient food-stuffs for his own family, marketing his surplus stock, exchanging the results of his labour : instead of endeavouring (as at present) to be an agricultural and pastoral Jack-of-all-trades. For, as a stock-country, South Africa can excel : but as an agricultural country, it is an accented failure.

**Stock farming recommended.**

**Prospects of agriculture.**

The prospects of agriculture in South Africa easily can be measured. Agriculture is governed by the law of "Diminishing Returns," it gradually reaches a stage when produce does not increase in proportion to the increase of labour. South Africa can employ her labour better in industries, which are governed by the law of "Increasing Returns"—industries in which every increase of labour adds more than a proportionate increment of production. To the theorist, who deals in "passive hearsay and dreaming by rote," agriculture in South Africa is a contemplative occupation productive of ideal satisfaction and quite barren of any practical benefit. The ordinary farmer wants interest on his capital : tangible reward for his labour expended, and the risk which he undertakes. Agricultural success in South Africa is extremely rare. Very few farmers indeed have made it profitable. But African farmers do not stand alone in this respect. The whole world may be searched in vain for a numerous body of eminent agriculturists who rapidly accumulated fortunes. Stock-farmers, and perhaps mixed farmers,

**What the farmer wants.**

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in South Africa and elsewhere, have grown rich when aided by a combination of science, energy, intelligence, skill, and luck. But South African agriculture (in the strict intention of the term), with its fixed outlays and very uncertain returns, its rates and taxes and wages and cost of living which must be paid, its dear and indifferent soils, its unfavourable climate, its dear and inefficient labour, and its limited market, is a different matter altogether. It is a precarious occupation for the capitalist of colonial experience and knowledge. It is something a great deal worse than precarious for the man of no colonial experience, who looks to agriculture for his livelihood.

**Agriculture precarious, and worse.**

Hence, from actual observation (during three-and-a-half years) of facts and conditions, and from careful study of the agricultural problem on the spot, I am of opinion that the agricultural prospects of South Africa are unpropitious; and that intending settlers will do well to expend their energies in other directions such as stock-farming, fruit, cotton, rubber, sugar, tea, castor oil, and tobacco.

**An opinion.**

The art and mystery of Husbandry comprises many branches. In writing on the prospects of agriculture and the agriculturist in South Africa, I have used those words strictly in their first intention, to denote the cultivation and the cultivator of cereals. It remains to speak of stock-farming, which (if not the most important) certainly is one of the chief branches of husbandry.

**The case for Stock-farming.**

Stock-farming at present is more common in England than it formerly was; and its tendency toward extension is testified to by the statistical returns of

**Increase of Stock-farming in England.**

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**Fiscalia.** the Board of Agriculture. Some husbandmen are exclusively stock-farmers: others engage in agriculture on a small scale as an auxiliary to stock-farming: but few are found today in England who are exclusively agriculturists. Those few are agriculturists perforce. They have no alternative. Their land is not suitable for laying-down as permanent pasture; and consequently they are obliged to adopt the rotation system. This class of farmer might perhaps have their hard lot mitigated by a duty of 2s. – 4s. a quarter on corn: but the much larger class of farmers, who have turned their land into pasturage and have acquired the art of stock-farming, could not be induced to change stock-farming for agriculture even though the current year's average price of wheat, i.e. 24s. 9d. a quarter, were raised by artificial means to 50s. a quarter. It would not be worth their while. Farmers are, not Idealists, but Realists. If they can make more money by stock-farming, they are not averse from permitting the foreigner to supply them with a cheap loaf, so long as he also supplies them with cheap fodder for their stock. Corn-growing in England today is not the industry which it was fifty years ago. If then, our "rulers and governours" who are advocates of Protection wish to favour the man who is now on the land, a duty on imported cattle and meat would seem to be very much more to the point than a duty on corn.

**Nature dictates.**

In this respect, the position of South Africa resembles that of England. The farmer has not an option between agriculture and stock-farming. On the contrary, the nature of the land and the nature of the climate dictate the nature of his occupation. Only the man devoid of knowledge, either of agriculture or of stock-farming, presumes to choose: goes-in headlong for one or the other on his arrival in South Africa; and eventuates in dismal failure. The more sagacious

## AGRICULTURE *vs.* STOCK-FARMING

adopt the industry, which is likely to be profitable because it is in accordance with natural conditions. If this be stock-farming, the man of common sense will say—"Let wheat be grown elsewhere: I prefer paying 6*d.* for my loaf to growing it on my farm at a cost of 7*d.*"

There is a demand for corn: there is a demand for beef and mutton, in South Africa. There also is a demand for gold and iron. Cultivation of corn is possible at a price: so is the manufacture of iron (in which the country abounds) possible at a price. The husbandman finds stock-farming more profitable than agriculture: the industrialist finds the production of gold more profitable than the manufacture of iron. The stock-farmer does not object to the importation of corn, and the gold-industrialist does not object to the importation of iron, so long as the imported corn and iron be cheaper than the home-production of the same. And the men who are engaged in these industries ought to know what suits them.

Husbandry is no new industry: but the oldest in the world. The ancients, who had brought it to a high pitch of perfection, deemed it the most honourable, most wholesome, and most delectable of all occupations. Those English husbandmen, who have acquired a knowledge of stock-farming, and who successfully have laid-down their land to pasturage, have no wish to adopt agriculture in its place. The general opinion, of all engaged in stock-farming in every part of the world where conditions are suitable, is that (of the two industries) it is the more profitable. The agriculturist is obliged to market his products within a certain time after their production, whether the market be favourable or unfavourable. If he fails to do so, storage and deterioration in quality and quantity inevitably reduce their value; and often-times annul it altogether. On the other hand, the judicious stock-farmer, who does

**Experience  
teaches.**

**In Praise of  
Stock-farm-  
ing.**

**Agricultural  
disadvant-  
ages, *vs.*  
advantages  
of stock-  
farming.**

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not overstock his farm, and who always has a reserve of grass or fodder, can afford to keep his stock until a favourable opportunity for marketing it. I did not meet a single bonafide agriculturist in South Africa, who could tell me that he had made a profit on an average of seven years' produce. The agriculturist generally, and especially in South Africa, is a needy hard-pressed man, leading a hand-to-mouth existence. He only can realize his produce after the annual harvest. All the rest of the year he is often in the hands of the dealers who supply him with seed and goods ; and his choice of time to sell, as well as the price which he gets from the dealer who has a mortgage on his crops, cause him nothing but annoyance and generally cruel loss. Again, the stock-farmer (who needs money for current expenses) can sell any number of head of stock at any time : whereas the agriculturist must sell his produce in one lot at one time.

Opinion of  
Cato Major.

When these things, with the relative hindrances proper to the two industries, are weighed and considered by the practical and experienced farmer, it is no wonder that stock-farming should be pronounced more profitable and in every way more agreeable, as an occupation on the land. This view is borne out not only by modern husbandmen, but the ancients also were of the same opinion. The severe Cato Major the Censor (B.C. 234-149) is cited by Columella.<sup>1</sup> In response to the question, "What was the part of husbandry by exercise of which a man quickly could become rich ?" Cato replied, "By grazing cattle well." Being asked again, "By what part a man might get a tolerably good income?" he replied, "By grazing cattle indifferently well." Columella continues,

"It grieves me to tell what further was said by this wise man on being asked, What was the third profitable thing in

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<sup>1</sup> (L. Junius Moderatus Columella. Lib. VI. *praef.*)

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"husbandry? He answered, To feed badly, especially when  
"the slothful and unskilful shepherd loses more than the  
"skilful and the diligent one gains."

Pliny<sup>1</sup> also mentions the foregoing; and adds that  
Cato, on being asked, "What produces the most certain  
profit?" replied, "If you feed well"; and again asked  
"What next?" answered, "If you feed moderately."

There are hindrances to stock-farming as well as to  
agriculture. These are more apparent in some coun-  
tries than in others. When the prospects of the two  
industries in South Africa impartially are weighed it  
undoubtedly will be found that the drawbacks of agri-  
culture preponderate over those of stock-farming.  
But, where an occupation on the land in South Africa  
is desired, stock-farming, with a little agriculture as  
an auxiliary, would be not only possible but profitable.  
Indeed that is the only system which presents itself to  
me as feasible under the present circumstances.

**The only  
feasible  
system.**

Two questions reasonably may be asked:—Why this  
system has not been adopted more generally; and,  
Why those farmers (who have adopted it) have not  
been more successful. Except in a few districts of the  
Western Province of Cape Colony, this system has been  
(and is) the only one practised. The farmers' staple  
produce is cattle, sheep, goats, wool, and ostrich-  
feathers. Many farmers have accumulated wealth;  
most of them have been able to make a living. But  
the results would have been (and could have been)  
much better, if the farmers had paid more attention to  
this special industry. The art and mystery of grazing  
is no easy science to acquire. There is no branch of  
husbandry which calls for so much matured judgment  
as the management of live-stock.

**Two  
Questions.**

The study of the animal — and vegetable — kingdoms,  
their relationship and interdependence, has been  
neglected. "Such are the varieties of the earth and

**The answers.**

<sup>1</sup> C. Plinius Secundus. *Historia Naturalis*, xxiii. 5.

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such are the qualities of the soil, that few know what it refuses and what it promises," says Columella. A small herd of cattle well selected is more profitable than a large herd neglected. Generations of South African stock-farmers have been propagating inferior breeding-stock, thereby diminishing the value of future stock. They have often forced, upon stock, conditions which are contrary to the laws of nature, aiming at large breeds of sheep or cattle, where small breeds would have been more advantageous because more in accordance with surroundings from which sustenance was to be drawn. There has been a general lack of self-reliance, not only in the farmer in relation to himself but also to the country. Want of capital, and above all, want of skill in the selection of breeding stock, also must be named as contributing to unsuccess and failure.

**Remediable defects.**

Darwin says, "Nature gives successive variations : man adds them up in certain directions useful to himself." The few points, which I have designated as defects in the South African farmer, are defects within his power to remedy. I am not inclined to condemn him because he is not on the same level with our English stock-farmer. Indeed, I will say that he has made greater strides, under extremely adverse circumstances, than might have been expected. There is, and has been for many years, a class of sheep — and cattle — farmers who have made wonderful progress with their stock : and it reasonably may be anticipated that, when the country has had similar advantages to ours in England, in the way of frequent stock exhibitions and freedom from disease, the South African farmer will not be far behind us.

**The chief obstacle to stock-farming.**

The chief hindrance to the establishment of valuable breeds of cattle in South Africa, is the prevalence of animal disease. I have dealt with this subject at some length in another chapter ; and I point out that this

## AGRICULTURE *vs.* STOCK-FARMING

serious obstacle is one which the Governments of the various colonies can remove.

It is difficult to estimate the quantity of the cereals grown in South Africa and still more difficult to calculate the yield of the various crops : while the farmers' indefinite and misleading method, of invariably measuring the yield by so-many-fold of the seed sown, makes it quite impossible (owing to the many variations of soil and seed) to arrive at the cost of production and the farmers' profit. Such, however, is not the case with stock-farming. Circumstances have enabled me to arrive at a very fair estimate of what a stock-farmer's profit may be, under the ordinary conditions of the country.

**Concerning  
cost and  
profit.**

The Rev. Charles D. Helm, who was a missionary in Rhodesia for fifteen years before the Occupation, told me that he always had kept a drove of cattle ; and that disease of any kind was unknown before 1896. In 1896-1897, however, rinderpest slew all his cattle except 11 cows, 1 young ox, 17 calves (bulls and heifers). Of these, he sold 2 cows. In 1900, lung-sickness afflicted the cattle in his district ; and he inoculated all his stock, losing 6 head from the effects of inoculation. In January 1902, he had a drove of 47 cattle, 8 of which were that year's calves. As the redwater (African Coast-Fever) was spreading, he sold 20 head at (what he called the low price of) £9 each for slaughter-cattle and £6 10s. for the year-old cattle : the usual price for slaughter-cattle being £12 to £14. He said that grazing was practically free ; and that good farms of 6,000 acres and upwards could be rented for a nominal price. He himself paid no rent for the land on which his cattle grazed ; and a native drover at 10s. a month was his only expense. Dr. Sauer had 50 head of cattle after the rinderpest in 1897. In the beginning of 1903 they had increased to 150 head. Good grazing land in Rhodesia can be purchased in

**Experiences  
of Rev. C. D.  
Helm.**



## SOUTH AFRICA

blocks at 1s. 6d. to 3s. an acre. According to the quality of soil and size of animals, 10 to 20 acres a head is considered sufficient to keep cattle all the year round. Therefore, the cost of the land (at 5 % interest on capital) is equal to about 2s. for the keep of a beast a year : the land which is worth 3s. being able to carry more cattle than that which is worth 1s. 6d.

**A wonderful  
recuperative  
country.**

I have had various statements from various parts of South Africa. All agree that it is the most wonderful recuperative country known. If it were not for the diseases, sufficient stock could be raised at so small a cost as to make an export trade possible and profitable. For some years, diseases of different kinds have left the farmers with barely sufficient breeding stock : but, if the droves (which were destroyed by diseases) had been spared, South Africa to-day would be overflowing with sheep and cattle.

**Cost of  
production  
in Rhodesia.**

The carcase weight of Afrikaner cattle is 600-650 lbs.; of Mashonaland cattle 350-450 lbs.; of Angoni cattle 300-350 lbs. According to the best authorities, if disease were absent, cattle in Rhodesia could be raised successfully to the above weight at an outlay of 25s. to 50s. a head. I mention Rhodesia (with which I may include certain parts of Bechuanaland in Cape Colony) because these are the only two countries where suitable pasturage can be obtained now at a few shillings an acre. The price of land in the other colonies makes stock-farming, on any considerable scale, out of the question at the present time : but, as the value of land comes down, (and it inevitably must), these colonies later-on will offer similar propitious prospects to the stock-farmer.

**Governments  
must control  
disease  
before  
stock-farm-  
ing is  
attempted.**

Notwithstanding all which I have said above, I wish it clearly to be understood that I cannot possibly recommend the investment of money in cattle, in South Africa, until the authorities make a more

## AGRICULTURE *vs.* STOCK-FARMING

intelligent and determined effort to cope with and to eradicate the diseases, which at present rage unchecked and uncontrolled — except on paper — a system which will not protect the stock-master. I am convinced that, if the Governments of the various colonies of South Africa will combine with such an end in view, modern science is quite capable of finding out the remedial measures which it is the duty of authority to apply. When this is done, when isolation of infected cattle is the rule instead of the exception, diseases will diminish and die out; and then stock-farming will become more general and more profitable. Then it will be for the farmer to have his pasturage in order, and his stock well-selected. Then he may look upon his cattle as so many free labourers working for his benefit: while the agriculturist is obliged to pay hired labourers to enable him to raise his commodity for the market. For the stock-farmer's sheep and cattle work for him, accumulating wealth day by day. The pasture is to the animal what coal is to the steam-engine, the source of its activity and function; and the animals' function is to accumulate flesh which the farmer can realise at any time. Rain or sunshine this process goes on. It is no great wonder, therefore, that those who have tried both agriculture and stock-farming, favour the latter and discard the former. For acres do not grow.

While specially recommending South Africa as a stock-raising country, (when animal disease is eradicated or at least controlled), I do not wish to imply that it is the best or even the second best stock-raising country in the world. If, however, it is selected by the emigrant for its healthy and bracing climate, and its many other advantages over other countries, then I say that (of all farming industries) stock-farming undoubtedly is the most promising; and, where land equal in pastoral qualities to certain areas

**Cattle as  
free  
labourers.**

**Stock-farm-  
ing; the most  
promising  
industry.**

## **SOUTH AFRICA**

of Bechuanaland and Rhodesia, can be bought for 2s. to 5s. an acre, there stock-farming safely may be recommended as being possible and profitable.

## Diseases of Animals

**S**OUTH AFRICA has almost all the diseases which have afflicted other countries, and perhaps a few which are peculiarly her own. In regard to the first, she may trace her misfortune and trouble to the uncontrolled importation of cattle from infected countries. In regard to the second as well as to the first, she only has her totally inadequate method of action to blame. Further, contrary to all experience elsewhere, stock-diseases in South Africa are on the increase. In South Africa, animal disease is in the saddle and rides mankind: whereas it is mankind who ought to be the rider. The forces of circumstances are grouped against man: whereas man ought to be grouped against circumstances.

Nevertheless, I do not deem the predicament of South Africa to be desperate. We, in England, have gone-through far greater trials, in the way of cattle-plagues, than has South Africa. It was not until we had spent millions of money and sacrificed thousands of cattle, that we became able to boast of our present clean bill-of-health. It has been a gigantic task, and one which never could have been accomplished without the voluntary and whole-hearted co-operation of the farmers and the inhabitants of the country with an intelligent unanimous Board of Agriculture and a sympathetic Government. This co-operation enabled the officials, who were responsible for the eradication

**South Africa  
has almost  
all.**

**Increase.**

**Hope.**

**England  
has suffered  
likewise.**

**England  
has found  
the remedy.**

## SOUTH AFRICA

of disease, to organize and build-up step by step a system of defence and attack : with the result that, today, we may say with a great deal of certainty that it would be as difficult for a cattle-disease to be imported, and to escape detection at the outset, as for a foreign invader to land upon our shores. English stock-farmers have unbounded confidence in the capability of the Veterinary Department. They now carry-on their industry of stock-raising in perfect security. But stock-raising in England fifty years ago was a far more precarious occupation than it is today in South Africa. This statement may be doubted by persons who have had rather bitter experience of South African Farming, and by those who look-upon that country as the hotbed of every animal-disease. Therefore, it is a matter of importance to South Africa that its present condition in regard to these diseases, should be compared with that of other countries, and thoroughly understood. Until this has been done, until evidence has been heard, it would be improper and premature to pronounce a condemnatory verdict.

### **History of Animal- disease in England.**

I will speak briefly of the history of animal-disease in England. In 1744, cattle plague (Rinderpest) was introduced by the importation of two infected calves from Holland. It raged throughout the country, slaying cattle by hundreds : except in the Principality of Wales, where the black Welsh cattle were found to be immune against it. These cattle are the descendants of the old British stock : but the cause of their immunity is not known. Nine years later, in 1757, the plague appears to have spent itself ; and no more is heard of it in England until recent times. During the last forty years, it has been imported twice from Russia and once from Germany. The strict and stringent measures, which were adopted on each occasion, finally stamped it out.

## DISEASES OF ANIMALS

In 1839, Foot-and-Mouth-Disease was introduced. The first outbreak lasted until 1879 ; and 6,000,000 cattle were affected. There was a second outbreak in 1880, which lasted till 1885, when 800,000 cattle were affected. And the third outbreak in 1892 affected 5,300 cattle. The first period of this disease lasted 40 years : the second, 5 years : and the third, less than one year. These facts testify to the efficacy of the measures adopted. There would have been a fourth and very serious outbreak of this disease in 1899, but for exceptional vigilance on the part of the Government Veterinary Department. No fewer than 27 shiploads of infected cattle from the Argentine Republic arrived in London and Liverpool. The first lot were discovered before they were landed ; and 3,793 cattle and 29,742 sheep were slaughtered on the wharves, within a period of six weeks. Some thousands already had died of disease on the voyage.

It was an object-lesson to the whole world, to see the systematic and appropriate manner in which the authorities carried-out the sanitary precautions necessary to prevent the spreading of this, the most infectious of all animal-diseases. The task was successfully accomplished : not a single case of disease was known outside the sheds and wharves. Science was triumphant ; and England was spared a loss which would have been a national calamity.

In 1840, Pleuro-pneumonia appeared in Ireland ; and subsequently found its way into England. The country at the time was reeking with Foot-and-Mouth-Disease. The farmers of those days, although they were losing heavily by the havoc which these two plagues wrought among their stock, were inclined to produce a martyr's smile and to regard their calamities with ostentatious resignation (not to say indifference), as " necessary evils." It was not that the Government was apathetic. On the contrary,

**An object-  
lesson to  
the world.**

**Pleuro-  
pneumonia.**

**Faith with-  
out works.**

## SOUTH AFRICA

it was endeavouring to legislate with a view to combating and stamping-out animal diseases. But the farmers looked coldly on ; and, in most cases, resented scientific interference. Many of them openly said that they suffered less loss from the diseases than from the measures adopted for their eradication. In fact, the Chairman of the Central Farmers' Club, with a representative of the Scots farmers, attended before a Committee of the House of Commons to protest against these measures, which they denominated impracticable and unnecessary. I lay great stress upon this curious attitude of the English farmers of the last century : because a verisimilar and equally mistaken conservatism (the "Idola Theatri" of Bacon) is the obstacle to progress among South African Farmers of to-day. I have taught (or tried to teach) elsewhere the extreme desirability of profiting by the experiences and blunders of our forefathers.

**The value of  
history.**

**Mr. Cope's  
estimate of  
what disease  
cost  
England.**

Mr. Cope, the chief veterinary officer of the English Board of Agriculture, estimates that, between 1870 and the eradication of Foot-and-Mouth-Disease, 4,500,000 cattle "fell with" that disease ; and 124,222 were attacked by pleuro-pneumonia, while the authorities slaughtered 73,300 healthy cattle as having been in contact with infected cattle. Such figures as these should lighten the heart of the South African farmer : for nothing is so consolatory to a loser as news of the losses of others. They should also make him earnestly desire a scientific system, which will be the means of clearing his country as England has been cleared. For England to-day is freer from disease than any country in the world, a fact which places greater value on her export breeding cattle for importers of such stock.

**Diseases still  
present in  
England.**

Besides the foregoing diseases which we have eradicated, England still has Scab, Anthrax, Swine-

## DISEASES OF ANIMALS

fever, and Glanders, which are sporadic, and are stamped-out directly they appear. We also have Tuberculosis prevalent; and it is to be regretted that this dire disease should continue to baffle the ingenuity of man. The only effective measures yet devised amount to the slaughter of all infected cattle: but, as 30 %-40 % of the cattle of Great Britain are infected, the cost of such slaughter would be so enormous that it does not come within the range of present practicability. I should like, however, to point out that probably, at this present time, it would not be an impossible matter to slaughter all the tuberculous cattle in South Africa. In that country Tuberculosis is still germinating. In time it will have spread as in England. What might be done now, cannot be done then; and a stitch in time saves nine; and a word to the wise is enough.

**Tuberculosis.**

**South Africa  
can diminish  
Tuberculosis.**

We turn to the history of the animal-diseases of South Africa. These are Rinderpest, Redwater or Coast-fever, Pleuro-pneumonia, Foot-and-Mouth-Disease, Heart-water, Horse-sickness, Tuberculosis, Anthrax, Scab, Swine-fever, and a few others of a malarial type.

**Disease in  
South Africa.**

Rinderpest was introduced in 1896: when at least 50 % of the cattle died of it. Since then a successful method of inoculation has been found, and generally adopted. South African farmers are no longer perturbed because of Rinderpest. They lose about 5 % of their stock from inoculation; and thus secure immunity for the rest.

**Rinderpest.**

Redwater or Coast-fever or Bovine Malaria has been the subject of experiments by Dr. Koch. This eminent scientist was brought to Rhodesia, for the purpose of conducting investigations beneficial to stock-owners, by the enlightened enterprise of the BRITISH SOUTH AFRICA COMPANY. He has established a successful system of inoculation, which, unfortu-

**Redwater or  
Coast-Fever.**



## SOUTH AFRICA

nately, is at present of a rather complicated form ; and it is to be feared that the farmers will not adopt it so readily as Rinderpest-innoculation, owing to the trouble which it involves. But Dr. Koch continues his experiments, with a view to finding a simpler and yet effective method of dealing with this scourge.

**Pleuro-  
pneumonia.**

Pleuro-pneumonia is already provided with a successful method of inoculation.

**Horse-  
sickness.**

Horse-sickness is one of the original diseases of the country. It was known to exist at the Cape at the end of the seventeenth century, when some thousands of horses in and about Capetown fell victims to it. But, for many years, it has not been known in that colony. Further north, however, it is still prevalent and exceedingly virulent : although it has disappeared from many districts where it formerly raged. From which it may be concluded that, even if a cure be not found for this disease, (the least understood of all South African diseases,) in course of time the progress of civilization and the more sanitary condition of the country may cause its evanescence.

**Heartwater,  
Tuberculo-  
sis, Anthrax,  
Scab, Swine-  
fever.**

The other diseases, Heartwater, Tuberculosis, Anthrax, Scab, Swine-fever, are not beyond the power of the Veterinary Departments and their respective Governments to deal-with ; and, when the farmers become more sympathetic and more energetic in their efforts to assist, the work of the authorities will become easier.

**Categorical  
comparison  
of England  
with South  
Africa.**

In order to make the situation as clear as possible, I will give a categorical comparison of English and South African conditions in reference to animal-diseases. The following is a statement of the case in England :—

**English  
unanimity.**

(1) English farmers, veterinary officials, and Government, are all of one mind and opinion as to the system of dealing with infectious and contagious diseases.

## DISEASES OF ANIMALS

(2) England has had over sixty years experience of animal-diseases; and, of late years, she has spared no expense in coping with them.

**English  
experience.**

(3) England is geographically isolated from all other countries.

**England's  
splendid  
isolation.**

(4) England will not import meat or live-stock from a country which she knows to have contagious disease of any kind. Importation of live-stock, beyond the wharf where they are slaughtered immediately on landing, has been prohibited for many years. A system of inspectors, maintained by England in countries which export to England, has had most beneficial results. Certificates of health by foreign inspectors are not accepted in England from any country.

**English  
system.**

(5) Qualified and experienced men are employed as inspectors of stock throughout the realm.

**Qualified  
inspectors  
everywhere.**

(6) One Department under one Government is made responsible for the whole country. It acts and controls as the brain of the body.

**One brain  
for one body.**

(7) England is fenced into farms. Any one, or any group of these, can be isolated quite easily. And isolation is of prime importance in dealing with contagious diseases.

**England is  
fenced.**

Far otherwise is the case of South Africa :—

(1) The majority of South African farmers are in antipathy to the efforts made by the Veterinary Departments for coping with animal disease. The Governments of the various colonies have not supported their Veterinary Departments, as the English Government did. The more ignorant class of South African farmers exhibit the usual quantum of low cunning in evading all precautionary measures, when their own stock is infected: but they practically shriek to the stars for pains and penalties on a neighbour who does the like.

**South  
African  
diversity.**

(2) South African experience of animal-disease

## SOUTH AFRICA

**South  
African  
inexperience.**

is a comparatively short one. With the exception of horse-sickness, South Africa had been practically free from disease from time immemorial till twenty years ago. But "difficulties make opportunities," and now that so many diseases have occurred together, it reasonably may be expected that the necessity for scientific treatment will be brought more forcibly before the farmers and the various Governments.

**South  
African lack  
of system.**

(3) South Africa imports cattle from countries where disease is known to exist. At the present time she is importing cattle from the Argentine Republic, a country from which England has prohibited importation on account of the Foot-and-Mouth-Disease which rages there. For this cause, we may expect to be obliged to include a fresh outbreak of Foot-and-Mouth-Disease among the plagues of South Africa in the near future. I have designated stock-farming as an industry for which South Africa is suited: but exportation of cattle from any of her colonies is impossible, until she is free from contagious disease.

**South Africa  
is unfenced.**

(4) South Africa, to a very great extent, is an unfenced country. Her system of transport, public out-spans and kraals, effectually prevent eradication of diseases which are conveyed by contact; and render isolation almost impossible.

**Five separate  
Veterinary  
Departments.**

(5) South Africa has five separate Veterinary Departments, each as independent of the others as though they were the Departments of foreign countries. South Africa has also five separate Governments and two or three Protectorates, all independent, each of a self-satisfied nature, and some of them with no horizon beyond their own frontiers. This, as far as the eradication of animal-disease is concerned, is very detrimental to the interests of the country as a whole and of the individual colonies which are therein. I will show a reason why. Before \_the

**Five separate  
Govern-  
ments.**

**A parallel  
absurdity.**

## DISEASES OF ANIMALS

War, the total white population of South Africa was estimated at 750,000. A county like Cheshire has a population of 792,000. And it may perhaps be better imagined than described what the condition of animal-disease in Cheshire would be if that county enjoyed the luxury of five independent Governments with five Lieutenant-Governors or Administrators, all running independent (I do not say "antagonistic") Veterinary Departments simultaneously. The point is clear and sharp. The present arrangement precludes all possibility of efficacious action in the event of an outbreak of contagious disease: for such action can only emanate from one central authority. Under present circumstances, the worst evils of competition and faddism ride rampant. The various departments and governments vie with each other in propounding theories, which do enormous credit to their imaginations and good intentions, but which damage reputations for practical dynamic common sense. Gazettes are filled with treatises "On the Futile"; and there the supply of knowledge and of energy fails, owing to the innumerable difficulties arising from the different measures and methods which the various departments and governments naturally adopt. It is quite safe to affirm that, so long as the powers of dealing with animal-disease are vested in several separate specialists controlled by several separate superiors (upon whose support they cannot always count), just so long will the curse of cattle-plagues endure. The system has been weighed in the balances and found wanting.

It is this very system which constitutes the one difficulty on the continent of Europe at this moment. There we have a parcel of countries separated only by artificial frontiers, each under separate authorities, and each notoriously infected by animal-disease. Mr. Cope (whom I have already quoted) states, in one of

**Present arrangement precludes prevention of disease.**

**Destructive criticism.**

**Evils of divided power.**

**Mr. Cope on France.**

## SOUTH AFRICA

his reports, that "France has every known animal-disease except the cattle-plague." Germany, Denmark, Austria, Russia, are never without disease. Holland is the exception which proves the rule : being the only country on the continent where an almost perfect system of combating disease exists, and importation of cattle is prohibited. International commerce on the continent of Europe, where so many divers authorities are in power, renders the eradication of disease a sheer impossibility.

**Unanimity  
the remedy.**

**Central  
Veterinary  
Council.**

**Contagious  
Animal  
Diseases  
Act.**

South Africa could unite. She could have representatives from each colony on a Central Veterinary Council which should treat the country as a whole. A single Contagious Animal-Diseases Act, with all the Governments and their subordinate Veterinary Departments in unity, would have a most beneficial effect ; and would tend to beget confidence in the future of the country from an agricultural and pastoral point of view. Let it be noted that the passing of such an Act in England in 1890 reduced the number of pleuro-pneumonia-infected cattle from four thousand to one — after three years.

**Superstition.**

It is perhaps rather a pity that there still should be people in South Africa who believe in the spontaneous generation of parasites. It is true that we are not quite sure as to whether the parasite is a cause or a consequence : although we know that it undoubtedly is the agent of transmission of disease. But due weight must be given to M. Pasteur's opinion, where he says :—

"It is in the power of men to banish all parasitic diseases from the face of the earth if, as I am convinced, the doctrine of the spontaneous generation (of parasites) is a myth."

**South Africa  
healthy for  
man and  
beast.**

South Africa really is an exceptionally healthy country from a human, as well as from an animal, point of view. For humanity it is a splendid health-resort ; and, before the importation of infected cattle,

## DISEASES OF ANIMALS

it was one of the healthiest stock-countries in the world. If these imported animal-diseases had been human diseases, it is impossible to conceive that they would not have been eradicated as intelligently (and therefore as effectually) as, for example, the Plague is, since it appeared three years ago along the coast and at Capetown. The Plague is treated with simple and efficacious sanitary measures and isolation. No human being is permitted to move from an infected area without medical examination. The Plague is as infectious as any cattle-disease. And I fail to understand why measures, however mind-grieving, which are successful in the one case, are not deemed applicable and adaptable to the other. It stands to reason that no South African Colony would admit immigrants from another territory which was infected by a contagious disease. Common sense would meet such cases with strict quarantine and stringent medical inspection. Yet cattle continue to be imported from here, there, and everywhere, quite irrespective of sanity. There is no quarantine : there is no real veterinary test for all the diseases which these cattle may be bringing with them, developed or dormant. Therefore I say that a practical system and method, similar to that used in dealing with human plagues and fevers, is absolutely necessary in the case of the cattle-diseases of South Africa ; and that, until the farmers and the Veterinary Officials and the Governments combine to pull-together in this direction, the country will continue to reek with animal disease.

It has been my duty to denounce the preposterous quintuplicity of authority, which impedes the prevention of cattle-plagues ; and, as no criticism is useful unless it is constructive as well as destructive, I have ventured to suggest Unanimity as a substitute. But, supposing the farmers of South Africa to be per-

**Isolation for  
human  
disease.**

**Isolation for  
animal  
disease.**

**FENCING.  
Constructive  
criticism  
continued.**

## SOUTH AFRICA

suaded to trample on superstition, and supposing the various Veterinary Departments to be willing to agree in the adoption of English methods, and supposing the different Governments to be induced to legislate on the recommendation of the Central Veterinary Council which I have desiderated for South Africa, there still remains one problem of prime importance to be solved. That is the matter of fencing.

**Isolation  
impossible  
without  
fencing.**

The lack of fencing is the great hindrance to the effective treatment of disease. Without it, isolation is impossible; and without the power to isolate, all the efforts of farmers, veterinary experts, governments, combined or uncombined, will be void and of no effect. A Compulsory Fencing Act is necessary.

**Compulsory  
Fencing Act.**

**Government  
assistance.**

If a farm is worth buying, it also should be worth fencing; and, if the farmers are unable to compass the necessary outlay, then the various Governments must come to their assistance. The cost will be enormous: but enormous loss will be avoided in the future.

**South  
Africa's past  
losses from  
animal  
disease,**

**say 2,850,000  
cattle,**

**say  
28,550,000.**

In order to give an idea of the losses which South Africa has already sustained in the absence of fencing, the following round estimate perhaps will serve. In 1896, Cape Colony had about 1,600,000 cattle; Orange River Colony, 1,000,000; Transvaal, 800,000; Natal, 700,000; Rhodesia, 600,000; Bechuanaland (Khama and others), 1,000,000; total 5,700,000 cattle. Cape Colony estimated its losses from Rinderpest at 30 % and the price at £3 14s. 2d. a head. Other colonies estimated their losses at 50 % to 90 %, and the price at £3 to £7 a head. It will serve my purpose to strike a low average, and to estimate an aggregate loss of 50 % at £3 a head; which will place the direct loss at no less than (say) £8,550,000 and (say) 2,850,000 cattle. I would repeat that this vast sum only re-

## DISEASES OF ANIMALS

presents the direct loss ; and takes no count whatever of the indirect loss caused (to give a single example) by the death of breeding stock. Such a loss as that indeed is irreparable, and incalculable in mere millions. Nor is Rinderpest the only plague which has wrought havoc in South Africa. I find that Cape Colony had 2,200,000 head of cattle in 1891 ; and that Pleuropneumonia and other diseases had reduced that figure to 1,600,000 in 1893. Further it is estimated that South Africa's loss, in wool and hides, from Scab alone, amounts to no less than £400,000 a year.

**Present loss  
from scab  
alone  
£400,000  
a year.**

My argument is that if half the money, which has been lost through diseases, had been spent in fencing, South Africa to-day would have been one of the best-fenced countries in the world. Incidentally she also would have been free from animal-disease, and the possessor of a clean bill-of-health. South African farmers can never know what an asset they have in the pasture of their country until it is fenced, or until some other (at present unknown) means of preventing the spread of disease is found. Over and over again, isolation has been proved to be an effective barrier. The testimony of Dr. Koch's *Report on Redwater or African Coast-Fever in Rhodesia* is much to the point. He brought cattle from a healthy district to his experiment-yard at Bulawayo, where there were infected cattle. He placed them in buildings enclosed by a wire fence four yards distant from the infected cattle. And he says :—<sup>1</sup>

**Isolation  
proved an  
effective  
barrier.**

**Dr. Koch's  
testimony.**

“ That these precautions are sufficient protection is shown  
“ by the fact that no case of extraneous infection has occurred  
“ amongst these animals since they arrived in Bulawayo.”

The mere fact of these cattle being only 4 yards apart from the infected ones is sufficient proof then of the efficacy of isolation. But, if this be not enough,

<sup>1</sup> Dr. Koch's *Second Report on African Coast-Fever*, p. 1.



## SOUTH AFRICA

**Cause of  
Essexvale  
droves.**

the Essexvale, and many other droves of cattle in Rhodesia, (being isolated,) are as free from disease today as they were before the scourge was introduced. I will cite also the personal testimony of a farmer :—

**A farmer's  
testimony.**

"Yes," quoth he, in response to my inquiry; " my cattle " are quite free from the plague. They are all in a ring fence ; " and my niggers always are watching to prevent any stray " animal from approaching. In fact we shoot all such " animals at sight. Fence the country, I say,—fence the " country, control the out-spans; and you will have healthy " and flourishing droves of cattle everywhere."

Those were his words, and I agree with them.

**England  
without  
fences ?**

What would be our position in Great Britain now, if we had had no fences ? We have millions of sheep and cattle on an area ten times smaller than South Africa ; and nothing has prevented devastation and desolation by disease except our admirably adequate system of fencing, which has enabled the authorities to declare an infected area, and to confine disease within the limits of that area by stringent regulation.

**Australia,  
New Zealand,  
America, all  
fenced.**

Australia, New Zealand, America, to say nothing of the other stock-countries, long ago have done those things which South Africa ought to have done ; and have left undone those things which South Africa ought not to have done ; and there is health in them, and no health (to speak-of) in Her. Her Governments engage in hypothetical dialectics : theirs, put-up hundreds and thousands of miles of fences. That is why they are ages ahead of Her. That also is why a better class of emigrants cannot be induced to settle in Her : for, so far, South Africa has gotten, for the most part, men on the land who arrive there without either money or experience. It is all that can be expected. No sane practical stock-farmer would dream

## DISEASES OF ANIMALS

of investing £2,000—£5,000 in stock which would be liable to rub shoulders with any strange beast who chose to come near.

To fence the whole of South Africa looks like an undertaking so chimerically costly as to be beyond the power of the community :— but it will have to be done, on a large and effective scale ; and the sooner the better.

**South Africa  
must be  
fenced.**

The following scheme is very possible at the present moment, simply as a temporary measure : while no time and no effort should be spared to continue it in permanence and detail. Let areas of (say) 500—600 miles be fenced. Let each fenced area have its qualified veterinary staff and inspectors, not so much with a view to acting in a crisis as, to act in warding-off crises. Let the police receive such practical teaching in Veterinary schools as will enable them to detect the symptoms of disease, and report the same to the authorities for diagnosis and treatment. And let each farmer be encouraged, (with pecuniary help if necessary,) by his Government, to fence his own farm without delay.

**A scheme.**

Fences fence-away diseases. Diseases being fenced-away, the farmer's stock increases. When his stock increases the farmer becomes wealthy and prosperous.

The welfare of the farming community of South Africa lies in the provision of a proper system of fencing ; and such a scheme ought to take precedence of all other schemes or reforms which are being undertaken for the advancement of the country. Until the authorities take this matter in hand, intending emigrants will be ill-advised to invest money in stock-farming in any part of South Africa.

**An opinion.**



## Insects

**N**O civilized country in the world can compete with South Africa in the matter of insects. I succeeded in making a fairly representative collection for my own edification and future study; and I have labelled each creature with its special taste according to plants, trees, or animals. To enumerate these destroyers of animals, these tyrants of the vegetable-kingdom, would involve the compilation of a long catalogue inappropriate here. Their powers of reproduction are nothing short of marvellous; some bringing forth their young alive, while the majority lay their eggs in innumerable myriads.

**Myriads.**

**Oviparous  
and  
Viviparous.**

It is of first importance to distinguish between those which are innocuous or beneficial and those which are noxious or injurious. Darwin has shewn what the lowly earth-worm does in modifying the texture and quality of soils. These, and their like, perform their functions for the service of man; and deserve to be treated accordingly. But other insects, whose influence is entirely otherwise, require stringent methods of annihilation.

**Noxious and  
Innocuous.**

In South Africa, every kind of plant becomes a host for swarms of insects. I noted that weeds served as better hosts for the destructive parasitic fungi (Smut, Mildew, etc.,) than the ordinary useful herbage of the country; and, as the cultivated land abounds in weeds, these pests are very difficult to eradicate.

**Weeds  
attract fungi.**

The following are a few of the commonest insects

**Common  
pests.**

## SOUTH AFRICA

which work such havoc among the vegetation of South Africa :—

*Red Spider.*

*Coddling Moth.*

*Black-spotted Beetle.*

*Lady-bird.*

**Lady-Bird.** A round red-and-black species which feeds on melons, pumpkins, potatoes, etc., and lays its eggs on the inner side of the leaves.

*Woolly-bear.*

A very common caterpillar. I saw several fields of potatoes which these pests had eaten as soon as the sprouts appeared above ground. There was a field of sweet potatoes, at Messrs. Harrison and Todd's farm near Barberton, where they were so thick on the ground that it was hardly possible to put-down a foot without treading on them. Needless to say, the whole crop had been ruined.

*Peach-fly.*

*Pear-slug.*

*Australian Bug.*

**Australian Bug.** A white rib-scaled insect introduced about thirty years ago, probably from Australia. These, and the different varieties of squamose insects, cause great trouble and loss to fruit-growers and farmers generally. These are among the most destructive kinds of insects.

*Locusts.*

Not very long ago, the locust was unknown in South Africa. Now, it is quite common ; and, as its habits are migratory, it is difficult to eradicate it, especially as the back country is so favourable to its reproduction. In this connection I will narrate the following, which if not "vero" at least is "ben trovato." A

## INSECTS

certain man sowed mealies three years in succession ; and saw his crops devoured by locusts on each occasion. The fourth year, he thoughtfully refrained from sowing ; and anon, to his enormous satisfaction, the locusts came as usual. " Ah," he exclaimed with joy ; " I have done you this time ! "

### *Ants*

are of two kinds, the useful and the injurious. The former take the place of Earth-worms, which are not so common in South Africa, except in parts of Cape Colony, more especially along the coast and in irrigated lands. Some of these Earth-worms attain tremendous size ranging from twelve to twenty-four inches in length. I myself found one, which was a few inches over two feet long and one inch in diameter. These worms undoubtedly do modify the texture of the soil to a very great extent : but they are not in evidence on the high plateaux. Their office chiefly is performed by Ants. These little creatures have extraordinary powers of working in the soil. They erect immense heaps which, in some cases, are diminutive hills ; but the majority are small mounds shaped like a bee-hive, all honey-combed, generally 2-3 feet high and about the same diameter at base. The earth, of which they are formed, is finely powdered ; and cements hard when dry. These ant-heaps are sometimes used as fertilizers ; and produce good results. Now, if the genus *Formica* could be induced to confine its constructive energy to the erection of earthworks, there would be little cause for complaint. Unfortunately, however, several branches of the family furnish a terrible example of mis-spent energy ; and are the most destructive insects in existence. Among these are the voracious White Ants, which attack almost everything. Young trees are sometimes mown-down by them in a very

**Huge Earth-worms.**

**Useful Ants.**

**Ant-heaps as Fertilizers.**

**Noxious Ants.**

**White Ants.**

## SOUTH AFRICA

Red—or  
Soldier—  
Ants.

short space of time. They move about in millions, attacking the wood-work of houses, burrowing through plaster as though with augers. The damage which they do is simply terrific. The Red-Ant or Soldier-Ant is a native of Northern Rhodesia. It attacks horses and cattle, settling on the heads of the beasts, feeding on the flesh and blood, and in a short time killing them. Both cattle and horses know when a swarm of Red Ants is approaching. They begin to bellow and to neigh in a most excited way ; and, if not instantly kraaled, they stampede.

### *Tsetse-fly*

is confined to certain swampy areas. It is fatal to cattle and horses : but donkeys, owing probably to their thick skin and long coats, are immune against this pest.

### *Mosquito.*

The Unprofitable Mosquito is well-known to most people, and needs no detailed description. It is more prevalent than it used to be. The old settlers in the country remember many districts, which are now infected, where formerly the mosquito was unknown.

The Entomological Departments of Cape Colony and Natal are making strenuous efforts to cope with the insect-pests. If the various colonies of South Africa were to combine their efforts and adopt one common system, the task probably would be found much easier.

## Co-operation and Agricultural Credit

**T**HERE are few countries in the world where farmers are so mulcted in their dealings, and where credit is so difficult to obtain on legitimate terms, as South Africa.

**South  
Africa's  
hardship.**

The farmer's banker, or creditor, usually is the storekeeper of the district. Many of these persons act straightforwardly with their customers; and business is done to mutual advantage. But the number of honest storekeepers is small. The majority force their wares on the farmers; and are devoid both of honour and straightforwardness. Their country-stores are established to supply the farmer with all his requirements in the way of goods and cash. The simple farmer often accepts proffered credit, little knowing that he is assisting an enemy to drag him out of his depth. Consequently, he and his property ultimately fall an easy prey to the unscrupulous usurer disguised as a storekeeper and benefactor. The wise rogue is the fool's natural parasite.

**Storekeeping  
bankers.**

**Disguised  
usurers.**

It is impossible to say how many farmers have found-out their mistake: or how few have profited by the experience of their neighbours. That the same old heinous system still goes-on plainly can be seen from the fact of the increase of mortgages upon farms,

**Increased  
mortgages.**



## SOUTH AFRICA

as well as from the number of farms which have passed out of the hands of the original owners, who had had them assigned to them by their respective governments for a nominal price. It is true that farming has not been a very profitable industry in the past : but, as the farmers had no rent to pay, it is astonishing that their farms should be encumbered with mortgages, while they themselves are reduced to the Bijwoner class and the Poor-White class with which the country swarms.

**An opinion.** The foregoing condition of affairs is the direct effect of bad system of trading, of bad system of borrowing, and of the bad principles of the parasite who settles-down in country-districts to prey upon the innocent farmer.

**The Spider.** The store-keeper bent on usury has no great difficulty in enticing the farmer into his trap. He supplies him with goods from the stores : advances money : supplies seed : buys his farm-produce. The only stipulation is that all produce must be brought to his store.

**The Fly.** Of the man who will finance you at the very moment when you need to be financed, none but the very best opinion can be formed. The farmer, who is deep in the storekeeper's books, soon becomes forced to accept whatever price for his produce which the storekeeper may be pleased to give him. And the farmer is so inconceivably simple. A certain farmer had dealings with two rival storekeepers in the *dorp*. One day, he brought-in some wool for sale. The first storekeeper, to whom he offered it, said that he would give him 6*d.* a pound. The second storekeeper offered 6 $\frac{1}{8}$ *d.* a pound. Incontinent, the farmer goes back to the first storekeeper, telling him that his rival had offered him 6 $\frac{1}{8}$ *d.* "Well, George," says Simeon, "I am not going to be out-bid by Levi, and so I will raise my price this once and give you

## AGRICULTURAL CREDIT

6½d. a pound." Overpowered by such appalling generosity, the farmer struck the bargain and sold his wool, even as he himself was sold. The wool was weighed forthwith. The farmer had provided himself with a Ready-Reckoner : for none are so cute as your essential simpletons. When the storekeeper stated that the price amounted to so much, the farmer demurred. According to his Ready-Reckoner, the sum ought to be so much more. The storekeeper asked leave to inspect the book. The farmer handed it to him ; and he instantly turned to the title-page, pointing-out that the book was ten years old, and not up-to-date, and therefore useless. And the farmer took his word ; and went sadly away : for he had had great prepossessions.

What the present credit-system means to the farmer is simply this :—He has to pay the highest price for the goods which he buys ; and he has to receive the lowest price for the produce which he sells. That is the dearest form of credit which possibly can be : for it mulcts the borrower in quality and price.

**The dearest  
form of  
credit.**

While this system is fatal to the farmer's progress, it is extremely difficult to provide a workable substitute. It would be easy to establish co-operative stores, where the farmers can buy what they require, and sell what they produce, at fair and reasonable rates ; and thus the nefarious negotiations of the present store-keeper might be circumvented. But there still would remain to be dealt-with the problem of providing each farmer with means to deliver himself from the usurious vampires who are sucking out his life-blood ; and to enable him to buy stock and implements, etc., for extended operations on his farm.

**The double  
difficulty.**

It is strange, but true, that farmers seldom borrow money wherewith to improve their farms. They are generally improvident borrowers ; borrowing when they are already deep in debt. The money

**Improvident  
borrowers.**

## SOUTH AFRICA

which they obtain from the usurer is handed-over to their creditors; and they themselves are, not better but, worse off than they were before. They probably were paying no interest on their previous debts: but, when they mortgage their farms in order to pay off pressing claims, they increase their liabilities without in any way improving their prospects. It is but a brief respite which they thus gain; and the end is inevitable ruin: whereas if the borrowed capital were invested in extending the scope of farming operations, it undoubtedly would prove to be a blessing. *It is often the case with a farm, where insufficient capital does not earn 0%, that sufficient capital will earn 10% or even 15%.* The tradesman glories in his credit. The more credit he can get, the more he will talk about it, and the more certain it is that he is getting on in his business: but the farmer, who only borrows when he is deep in debt, is afraid of his neighbour knowing the condition of his affairs. Commercial and agricultural lendings are unequal yoke-fellows. Commercial lendings move faster than agricultural. It is (a) the lack of the commercial instinct, (b) the false pride, on the farmer's part, which prevent him from borrowing money when he can make good use of it like the tradesman. The farmer entirely fails to see that his real interest, as well as the interests of all with whom he is connected, lies in the equipment and extension of his business, and not in paying-off a debt which has been accumulating in dribblets, for want of sufficient capital at the start, or for tiding over a bad season. Indeed, for sheer futility, the last method of procedure resembles the hopeless heartless task of baling out a sinking ironclad with a teaspoon.

**Insufficient  
capital will  
not earn  
0%**

**Sufficient  
capital will  
earn 10%  
- 15%**

**Why far-  
mers fail.**

**The great  
Difficulty.**

Other farmers of other countries have been confronted by similar difficulties. It is a phase through which all industries connected with the land must

## AGRICULTURAL CREDIT

pass, in order that experience may be gained. Of course the price paid for such experience is a bitter one to those who have to pay it: but now-a-days there really is absolutely no occasion for it to be paid. The difficulty has been experienced, the bitter price of it paid, and the solution of the difficulty found, in Italy, Germany, France, and Belgium. Why then need South Africa hesitate for a moment about profiting by the experience of these older nations?

**Experience  
gained by  
others.**

Farmers' difficulties have been solved by the establishment of Agricultural Banks, which have done inestimable good. The real problem of Agricultural-Credit Banks resolves itself entirely into one of security. At present, few farmers have any recognized security which the money market would accept. If they had, such security could do its own borrowing. As they have it not, most farmers continue to revolve in a vicious circle, from which they are unable to escape; and they fall an easy prey in the web of the spider-usurer, whose sole and only object is to exhaust and ruin them.

**The Diff-  
culty  
solved.**

The farmers' credit is of two kinds:—(a) Mortgage credit (b) Agricultural Credit. It is the latter which really concerns him. Mortgage on his farm is an encumbrance on dead land. If the farmer has neither stock nor money for improvement and development, a mortgage on his farm is insufficient, and means a high rate of interest. What the farmer really wants, and what alone is of the slightest good to him, is money wherewith to construct dams, to level his land, to buy implements and live stock, and to tide through the preliminaries and perhaps the first one or two bad seasons. He perfectly knows that, if he could get this money—if he could feel the tremendous confidence (which the mere command of money gives) at his back—he could make good use of it. He perfectly knows that it would bring in double the

**Farmers'  
Credit.**

**Mortgage  
encum-  
brance on  
dead land.**

**What the  
farmer  
wants.**

**What he  
could do  
with it.**

## SOUTH AFRICA

interest required to pay the lender; and that the balance would be profit, much of which could be applied to the extinction of the loan. But it is the utter hopelessness of obtaining this oil for the greasing of the wheels, that is mainly responsible for the degeneracy of the farming class. Farmers are only men; and, being men, they have their feelings; and, when those feelings are bruised and blunted by the disappointment which renders potentiality impotent, naturally the facile descent to Avernus begins.

**No difficulty about borrowing for commerce.**

Every other industry in the country is carried on to a certain extent on borrowed capital or by joint-stock companies. There seems to be no difficulty about borrowing for commercial enterprises: but the man, who wants to raise farm produce, has no means of borrowing upon real security, for he has none to offer. In this connection I will cite the extremely pregnant Chinese proverb, which says, "The Land should be the greatest Borrower of the Nation."

**A floating cash credit balance.**

A farmer, who has a floating cash credit-balance, at once is in a position to make substantial progress and profit. It is true that he is not able to turn-over his capital ten or twenty times a year, as a tradesman does; but he can do so once, if not twice; and he generally can make a far better return on the turn-over than the tradesman, so long as he has sufficient capital at his command. But, when he is obliged to sell cattle or sheep or horses a few weeks before they are in a fit condition for selling — or, when he has sufficient pasture (as is the case in some seasons) for grazing double the number of cattle which he possesses — he is unable to do himself justice, either by retaining his stock from the market until such time as they be fit for selling at a profit, or by increasing his stock in proportion to his pasturage, simply because he is short of capital. This, and the fact that he has to buy in the dearest market and to sell

## CO-OPERATION AND CREDIT

in the cheapest, are the causes of the South African farmer's economic strangulation.

The system of Agricultural Credit Banks varies in Italy, Germany, and Belgium: but the one great feature, common to all, which makes them convenient as well as acceptable to the farmer, is that the requisite security is of a personal nature based on the co-operative principle. A farmer, who also is a member of the Bank, applies for a loan: he and his family, and probably his neighbours also, become sureties for the repayment of the said loan. This liability-sharing also means (to the family or community who are jointly liable) a right and title to profit-sharing. Consequently, it means better quality of work, better economy of force, better vigilance in regard to common interests, better incitement to industry and thrift; and (incidentally), it makes the profession of the Brotherhood of Man a little less difficult to practise.

**Agricultural  
Credit  
Banks.**

**Personal  
security.**

**Liability-  
sharing  
means  
Profit-  
sharing.**

Thirty years ago there were no Agricultural Credit Banks in Germany: now the Raffeisen Union of Agricultural Banks does a business of about £2,000,000 per annum with a regular rise every year. Signor Wollenborg established Rural Banks in many districts of Italy, which are of the greatest service to the small farmers. The Bank of France discounts the bills of French Agricultural Banks; and the leading Banks of other countries do likewise.

**Agricultural  
Credit Banks  
in Italy,  
Germany,  
and  
France.**

A number of men, linked together by a common bond with common liability, offers the precise species of security which banks require; and supplies a more effective means of checking the borrower than would be the case when the latter is a single individual. Co-operation Credit, by a natural connection of interest, must mean also an incitement to thrift. Agricultural Banks do not take the field in antagonism to existent commercial banks, but rather as valuable

**Co-opera-  
tion Credit.**

## SOUTH AFRICA

auxiliaries breaking new ground. Their object is to make the capital, which is available, also accessible, at cheap rates, to farmers. An Italian Bank offered to find four-fifths of the capital required for starting a number of Agricultural Banks in the district. M. Giraud, head of one of the local branches of the Bank of France, found, some years ago, that (for want of money) farmers were not turning their land to the best account. He decided to lend money at 1 % above the ordinary bank-rate to all farmers on personal security. His offer was readily accepted by the farmers, who promptly borrowed 140,000,000*l.* (say five and three-quarter millions sterling). In this transaction, he netted for his bank the additional 1 % and put no less than a million in the pockets of the farmers.

It is impossible to state which, of the various systems adopted on the Continent, would be most suitable for South Africa, until the systems and South African conditions both have been examined more minutely.

**Opinion of M. Leon Say.** It is a household saying in Germany that whoever sets up a Raffeisen Bank pulls down work-houses. Speaking of Agricultural Credit Banks, M. Leon Say remarks :—

“ They cause agricultural prosperity to develop with increasing energy.”

**Opinion of M. Rostand.** M. Rostand says :—

“ Freed from usury, the farmers have regained courage and confidence. They feel a love for and a pride in their humble institution of Agricultural Banks.”

**Banks seldom lose by cash credit on personal security.**

Agricultural Banks combine, in a happy union, the spirit of business with the sentiment of that true and practical philanthropy which is abhorred by the deridable futility at present masquerading in the guise of Charity. Give the South African farmer,

## AGRICULTURAL CREDIT BANKS

who is in need of capital, a floating cash credit-account. He will deliver himself from the usurer : he will develop the resources of his farm : he will discharge his liabilities in an honest and straightforward manner. There is not, in Germany or Italy, a single case where the borrower has failed to meet his liability to the Agricultural Banks. In fact it is well-known that banks of all kinds seldom lose by cash credit on personal security.

The Report of the Lords and Commons Committee on Banking in 1826, contains the following :—

**Report of  
Lords and  
Commons  
Committee.**

“ Any person, who applies to the bank for cash credit, is called upon to produce two or more competent securities who are jointly bound : and, after full enquiry into the character of the applicant, the nature of his business, and the sufficiency of his securities, he is allowed to open a credit account.”

The Report of the same Committee further says :—

“ that this system has great effects upon the moral habits of the people : because those, who are securities, feel an interest in the watching over the conduct of the borrowers ; and, if they find that the borrowers are misconducting themselves, they become apprehensive of being brought into risk and loss for having become their securities, and they withdraw the security.”

Co-operation, in buying seeds, manures, implements, marketing the produce, etc., undoubtedly would be of great benefit to the South African farmer. But the attempt to establish such a system, (without first of all establishing an Agricultural Credit Bank where the farmer could obtain loans at a reasonable rate of interest,) would be quite impossible of accomplishment ; and, where the banking system is established and understood, there would be no difficulty about providing capital for, or discounting the bills of, Agricultural Credit Banks.

**An Opinion.**





## Colonization<sup>1</sup>

**T**O settle men of English origin on the land in South Africa is a matter of great political importance. It also is of vast significance to the future prosperity of the country.

**Need of  
English  
Settlers.**

No diversity of opinion on this point exists among those who wish South Africa to flourish under the sceptre of the King's Majesty. Recurrence of dissensions and disorders, which have cost England so huge an expenditure of blood and treasure, would be impossible when men of English birth are planted in the rural districts, and when prosperous industries employ a large proportion of English labour. The task of creating a preponderance of loyal subjects, although it bristles with preliminary difficulties, is by no means an impracticable one.

**Loyal sub-  
jects wanted.**

Military and political schemes hitherto have been advocated. These are formed on purely theoretical lines; and cannot be said to have achieved any signal success. A great deal of money has been spent, since the Peace of 1902, on Land-settlements. Unfortunately, these have not been very successful, — except in creating a class of agricultural paupers who, instead of being (as was intended) a source of strength to the Government, are today a source of weakness.

**Agricultural  
paupers at  
\$1,000,000.**

But it is not my intention to treat of the Land-settlements of the past. I reserve that pleasure until I have revisited South Africa. My present purpose is to deal with the question of colonization, not from

**The Settler's  
point of  
view.**

<sup>1</sup> Much of the matter contained in this chapter was used in the CONFIDENTIAL REPORT.

## SOUTH AFRICA

the point of view of the sentimentalist, or of the politician, or of the interested Land-Companies, or of the speculators in agricultural and pastoral land, but simply and solely from the point of view of the settler.

**Two points.**

The first matter for consideration is the suitability or unsuitability of South Africa for the English settler. The second, is the class of settler which is suitable or unsuitable for South Africa.

**Settler should be English.**

It is agreed that the settler ought to be of English origin ; and that he, if possible, ought to be recruited from the farming class in England. Now that class in England happens to be comparatively a small one, as may be seen from the following statistics.

	Population	Unemployed	Employed	Percentage of Employed engaged in Husbandry
England .	41,000,000	27,000,000	14,000,000	1,500,000 = 10%
France . .	39,000,000	24,500,000	14,500,000	6,500,000 = 44%
Germany .	56,000,000	36,000,000	20,000,000	8,000,000 = 39%
U. S. A. .	55,000,000	33,000,000	22,000,000	8,000,000 = 37%

This shows the proportion, of those engaged in husbandry in England, to be actually four-and-a-half times less than that of France. Nevertheless, although this is but a limited class from which to draw settlers, I maintain that it is the only class in England which is capable of furnishing men likely to succeed on the land in South Africa under present circumstances.

**Unsuitable settlers.**

During my investigation of affairs in South Africa, I visited several settlements which were being established. I regret my inability to say positively that I met a single settler there who had been drawn from the limited class named above. Whether those settlers, whom I did meet, came from the Employed class at all, is a question in reference to which I

## COLONIZATION

do not care to express an opinion. I merely trust that they did.

However, there should be no difficulty in recruiting suitable settlers, even from our limited 10 %, if the matter be undertaken in a business-like manner. I cannot repeat too often that farmers, and those who understand farming, are not idealists but rigid realists. Husbandry is a science ; and science takes nothing for granted. If the prospects of South African farming are demonstrated, to desirable people in England, in a plain unvarnished tale—if the advantages, and the disadvantages, are explained in an intelligible manner—by men who understand the conditions of South African farming as well as the conditions of English farming and English farmers—then I deem it possible to recruit settlers in this country, who would succeed as farmers, who would prove a back-bone to South Africa and a source of strength to her governments, thus fulfilling the wishes of those interested in her political welfare. But not otherwise.

**Suitable  
settlers.**

In inviting farmers to settle in South Africa, it is not unimportant to remember that the English farmer is, not the bucolic oaf of the caricaturists but, a highly civilized individual with all the abilities and tastes and habits of an English man. He, in fact, is likely to be less indifferent to the advantages of civilization in a strange land than in his Mother-country. The very incompleteness of South Africa will accentuate the memory of all the every-day amenities which he has left-behind in England. The education of his children, and the society of congenial neighbours, will become matters of extreme importance to him. The idea, that the yeoman of England can be dumped-down on the veld of South Africa like oxen, may as well be dismissed forthwith. Due weight must be given to the dual aspect of the English farmer. Nor is it to be forgotten that the Englishman and the Boer are very

**Character-  
istics of  
the English  
husbandman.**

## SOUTH AFRICA

different in their ideas and habits. The life of the back-country Boer would be intolerable to the average English farmer, who is accustomed to social intercourse and a considerably higher grade of civilization. Further, I warn those misguided persons, who indiscriminately advise every Tom, Dick, and Harry, to emigrate to South Africa, that (to be a successful farmer in any country) a man must have capital, as well as practical experience of farming. Men without experience are not going to succeed : neither is the purely theoretical capitalist with desire for farming going to succeed. Knowledge is power, no doubt : but only the knowledge which is obtained, by observation and practice, from that continuous system of Becoming which we call Nature.

**Settlers who  
will succeed.**

South Africa wants settlers who, at the very outset, are in sympathy with her : who at once are able to grasp her conditions and disadvantages, such as the difference of languages, the problems of native-labour, drought, hail-storms, locusts, animal-diseases, etc. She wants settlers who carefully consider their liability to failure, before getting thoroughly established. The risk naturally is great to those who attempt to farm with insufficient capital, or with too much borrowed capital. A reserve of extra cash is absolutely necessary, as protection against all possible risks of failure while one gains familiarity with the new conditions which are necessary to be understood. I firmly believe that a desirable class of settlers can be had : but I know that means very different from those which are the vogue must be adopted for recruiting them, as well as very different methods of settling them on the land.

**Theorists  
denounced.**

People on this side, as well as in the new colonies, do not realize that the herding-together of inexperienced impecunious English emigrants, in settlements of a few acres (not always of the best land), is a sure and certain

## COLONIZATION

way of achieving disaster. Theorists arrive, knowing nothing of the man whom it is intended to plant on the land ; and one of our most fatal habits is our proneness to listen to glib theories.

We do not grasp the fact that the farmer's life is a special study : that his wife and children are to him very important factors on his farm ; and that to ignore their comfort, or their tastes and feelings, is bound to militate against the success of any colonization-scheme.

**The farmer's need.**

One has but to study the history of the past, in Canada and other countries, for the exposure of many modern fallacies. Goths and Huns, Chinese and Irish, and perhaps some Latins and Orientals, may be herded-together in new countries in very strange conditions : but not Englishmen. Theorists' schemes have failed in other countries : they have failed also in the Transvaal, where I myself have seen men and their wives huddled-together in tents.

**Theorists' fallacies.**

The Englishman has great qualities, as long as he has liberty, and not a moment longer :—as long as he has his independence, and can sulk in his own corner when the spirit moves him. But as a stereotyped settler, confined to a few acres of land, he is as suitable as a square peg to a round hole. And it invariably is the hole which suffers most.

**English qualities.**

The following, therefore, in my judgment, are the main points of a successful colonization-scheme :—

**A scheme adumbrated.**

- (1) Selection of the most suitable colony in South Africa. Selection should be influenced not by political considerations, but by the qualities of the Colony as affording good land in plenty, at a low price, with congenial neighbours, and a healthy climate, etc.
- (2) Selection of a class of settlers, from England, who have both capital and experience, as well as grit and energy.
- (3) The establishment, in the chosen colony, of a stock-farm (to be called The Home Farm) with an area of irrigated land. The manager of this Home Farm to be an expert, both in knowledge of the country and of farming in all its branches. The erection, on the

## SOUTH AFRICA

Home Farm, of 20 to 30 cottages, some single and some double, where bachelors, and married men with their families (selected in England), could go on their arrival in South Africa. Arrangements for these settlers to be supplied with everything which they require, at a reasonable price, during 9 to 12 months' stay on the Home Farm. Provision to be made there of maps, particulars of every available farm in the colony, expert advice as to locality, values, general conditions of land which settlers might feel inclined to occupy, etc.

**Merits of the scheme.**

The merits of such a scheme as this are obvious. The Home Farm would be of the greatest convenience to men who cannot afford extortionate hotels. During their stay, they would begin the process of acclimatization, and learn much of the new conditions in which they were to live ; and all this without deprivation of the amenities of civilized life. Then, if (at the end of 9 to 12 months) they found that the country was not likely to suit them, they could return home, or go elsewhere, without having spent all their capital in an experiment which failed. Or, if they decided to take a farm of their own, they might be supplied, (at a reasonable price,) with stock, implements, building-materials, and a hearty send-off, from the Home Farm.

**Present disadvantages.**

At present, a settler (who goes out at his own expense) pays dearly for everything, while he is looking for a farm : he has great difficulty in getting reliable information and advice ; and, when he is suited, he has to pay extraordinary prices for the equipment of his farm.

**The interests of the settler and of South Africa.**

Hence in the interest of South Africa not less than in the interest of would-be settlers, I am led to offer these proposals.

**An opinion.**

South Africa has five colonies. Some of these have already disposed of their best land. I have compared the various soils, herbage, and prices of farms, in all these colonies.

I have also expressed an opinion as to the particular

## COLONIZATION

branch of husbandry which I consider to be suitable (because possible and profitable) for the English settler.

I have looked at the question of colonization from the settler's point of view ; and, after carefully and impartially weighing all the conditions of settlement on the land, I have not the slightest hesitation in saying that Rhodesia stands first and foremost in its prospects for stock-farming — the only farming industry, at present sufficiently proved, to warrant the embarkation of capital.

Nevertheless, in saying this of Rhodesia, I wish it clearly to be understood that, under the existing chaotic inadequacy of the arrangements for dealing with animal-disease, neither Rhodesia nor any other Colony of South Africa is in a fit state for any sane practical man to invest money in stock. **A qualification.**





## Natives

**S**OUTH AFRICA entertains a number of barbaric races, widely different each from other in language, manners, aspect, and character. The native population is estimated at about  $8\frac{1}{2}$  millions. In Cape Colony and the Transvaal, the blacks are thrice as numerous as the whites. In the Orange River Colony, they are about twice as numerous. In Natal, however, they are ten times as numerous : while, in Rhodesia and the rest of South Africa, they form a much larger proportion of the population.

**2,500,000.**

**Distribution.**

The word Kaffir is the common term used for all natives of South Africa. The natives consist of

**Species.**

- (a) Uncivilised Kaffirs, ruled by their own chiefs or headmen :
- (b) Half-civilised Kaffirs, who live in locations near towns and on farms, and are not subject to barbaric chiefs :
- (c) Cape Boys, who are a cross-breed of Hottentot and Malay with an occasional infusion of European blood. These, with the Coolies and Chinamen, form the substratum of South African Society.

Kaffirs, at all times and in all places, must be regarded as nothing more than grown-up children : but they are devoid of the innocence which is the exquisite charm of children. Their innumerable natural vices, together with the hideous caricature of vice which they have acquired from degenerate white men, are the curses of their race. Conspicuous among these are intemperance, lying, thieving, deadly quarrels, and congenital idleness : the last being a habit undoubtedly

**Kaffir  
Character-  
istics.**

**Vices.**

## SOUTH AFRICA

### **Education.**

### **Evil effects of "Educa- tion."**

inherited from ages of idle progenitors, but also as undoubtedly nourished and fostered by the ridiculous ineptitude of the treatment which they receive from well-meaning and fatuous white men. Few Kaffirs are educated, in the modern intention of the word. Many are eager to learn : but their intellectual capacity is singularly limited. And a little knowledge is a very dangerous thing. The worst class of natives which I observed in the country were those of the servile class who had a smattering of "education." This kind generally infest towns, where they receive high wages. They are invariably impudent, insolent, independent in manner, improvident, and quite unreliable. They tell the white man what they think will please him : apparently being quite unconscious of the sharp line which divides truth from falsehood. The Dutch have the reputation of understanding the peculiar characteristics of these sons of Ham better than anyone else. The natives certainly understand the Dutchman ; and obey him accordingly.

### **Bright exceptions.**

But I have met very bright exceptions, even in the servile class of natives. I have met black men with more than a mere smattering of education, who are honest, reliable, and in every way intelligent. They are relatively few in number ; and I would not have it supposed for one moment that "education" alone has been the means of differentiating them from the majority. The fact is, that they generally are to be found, not in the towns but, squatting on farms. I think that is the secret of the whole matter. The native, with a whole ancestry of barbaric progenitors, only can be pitch-forked headlong into the complexities of modern sophistication at the peril of the complete upset of his unsophisticate mind. The Kaffirs, of whom I speak as serving on the farms, get a gentler introduction to civilization. I forget how many generations it takes to make a gentleman out of an

### **Gentler introduction to civilization necessary.**

### **Not in Towns.**

## NATIVES

Englishman : but I do know the catastrophical absurdity of attempting to make a "Jeames" or even a "Hodge" out of a black man, who started in life as a naked howling savage in feather garters ! No : the proper place for the native is the land, at least for the present. There he acquires the modern virtues in digestible doses. He learns the dignity of labour. He learns the great lesson of obedience ; and as a rule is very loyal to his Baas : which means that the Baas cares for him and treats him as he (in common with all the children of Nature) ought to be treated, i.e. with firmness and with justice.

**The native  
for the  
land.**

**Firmness  
and  
Justice.**

Each native race has its own language or dialect. The natives, who live in towns or on farms, speak Dutch and generally a little English. The Zulu tongue (which is a living tongue) is also, to the South African languages, what Latin is to European languages.

**Languages.**

The wealth of natives chiefly consists of droves of cattle, flocks of sheep, tribes of goats, and as many wives as each man can buy. Their religious ideas are very comprehensive. Some adopt various kinds of Christianity : others practise the aboriginal worship of ancestral or heroic spirits. Some bury their dead in regular cemeteries : others in the dung of their cattle kraals.

**Possessions.**

**Religions.**

There are no large native industries : except agriculture on very primitive lines. The women are the workers : and the men, the drones. In some parts of South Africa, they trade (exclusively among themselves) in native hoes and picks. These implements are made from the local iron-stone, which the natives themselves smelt. Some of their work is clever, shewing great ingenuity and technical skill.

**Industries.**

Little or no community of ideas exists between the whites and the blacks ; therefore there is not only no sympathy, but very often a great deal of antipathy. White men are averse from condescending to argue with black

**White vs.  
Black.**

## SOUTH AFRICA

**Sjambok.** men. Black men, on the other hand, often neglect to obey ; and this habit of disobedience together with a general lack of intelligence, energy, and reliability, often compel the European to resort to physical coercion. It is not my intention to affirm that the infliction of corporeal inconvenience is the rule. I merely note it as the exception. The rule is, that very great allowance is made for the native's natural shortcomings ; and that most white people treat them with singular consideration.

**Manual  
Labour.**

The white race in South Africa seems never to have preserved or acquired the habit of performing manual labour on the land. Such occupation is deemed derogatory to European dignity. This is the reason why all the unskilled labour, agricultural and otherwise, is done by aboriginals. The white man only will do what the black man cannot do ; and, even then, he will not move unless a barbarian attends at his heels. In some cases, where a native has become wealthy, he employs a degenerate white man to work for him : but it is notable that the latter always stipulates that his black employer shall call him " Baas."

**Native  
Labour  
Question.**

The question of native-labour, regarded from the farmer's point of view, is one of vital interest. Under a sagacious and statesmanlike " Native " policy (which should be dictated by local conditions and framed by local authority unembarrassed by interference emanating from the Home Government), there probably would be no such thing as a " Native Labour Question " in South Africa. There is no doubt whatever but that the native represents the raw material from which an indispensable asset could be fashioned. He comprises in himself unlimited opportunities for the cyclical conversion of food into muscle, muscle into labour, labour into food, and so on, and so on. To this end he requires apt and proper manipulation.

**Local  
administra-  
tion needed.**

## NATIVES

The difficulty which South African farmers experience, in procuring an adequate supply of labour, has become extremely grave. Every meeting of every Farmers' Association propounds proposals and passes resolutions with the object of meeting the demand for labour : but without any actual effect, so far.

**Agricultur-  
ist's diffi-  
culty.**

The Governments of the various colonies, the mine-owners, and the farmers, are competitors for the labour of the native. The prize invariably goes to the rich mine-owners and the Government : because these are in a position to pay wages amounting to £3 - £4 a man a month ; and, even then, the supply is not equal to their demand. This rate of wages and insatiable demand for Native labour places the farmer in an awkward and (indeed) an impossible predicament. Labour he must have, but he cannot obtain it in competition with such potent rivals.

**Competitors  
for native  
labour**

Though there were occasional cases of cruelty and oppression under the Boer regime, the native generally was well-treated ; and, at the same time, means were found for compelling him to work. The native is lazy ; and his real wants are few. An English farm-labourer at 8s. or 9s. a week does as much work for his pay as four natives of South Africa. The Englishman is reliable. The Kaffir is not. Yet the farmer is expected to remunerate the native out of all proportion to the value of his services. The inadequate supply of labour for the mines, railways, husbandry, and all other South African industries, so frequently and so persistently is made the subject of comment, that we are apt to forget the other countries which are suffering from a similar deficiency. Proposals have been made to recruit labourers for South Africa from other countries. The Chinaman and the Coolie will not serve the purposes of the South African farmer ; because their inclinations are too mercantile : but they admirably would suit mine-owners. The introduction of

**Farmers  
left out in  
the cold.**

**Boer  
methods  
with  
natives.**

**Comparison  
between  
English  
and  
Kaffir  
labour.**

**Unsuitable  
proposals.**

**An opinion.**

## SOUTH AFRICA

Yellow Labour at the mines will liberate a quantity of Black Labour for agriculture.

**England's  
abroad  
policy.** The South African native really and truly is the only source of Labour for the South African farmer. There are  $8\frac{1}{2}$  millions of him, living in peace under English rule. Not all of these  $8\frac{1}{2}$  millions are employed. England has adopted a policy which prohibits the slavery of the black male, and encourages the slavery of the black female. That is the kernel of the whole matter in an open nutshell.

**Incorrigible  
native  
idleness.** The native wants little, except to be left in his bestial idleness. His women (when he possesses such commodities) labour to produce his means of sustenance. Natives only work, in the mines or elsewhere, in order to procure such a mode of life as this. Those, who have acquired European habits and a taste for the necessities of civilised life, find it absolutely necessary to work in order to satisfy their wants. But these are the great minority. Kaffirs of this kind may be compared to a drove of cattle, which (in summer when the meadow-grass is plentiful), never looks toward the shedding where the winter-fodder is served : but (in winter when the pasture fails) bellows and flocks to that point in the field which is nearest to the shedding and the food. No English farm-labourer can be idle for a week without feeling the pinch. But the Kaffir, in his aboriginal state, requires little beyond the produce of the land which his females till for him. He has no actual need to work, being only a very little

**Civilisation  
involves  
work.** higher than brute beasts in tastes and habits. Therefore I think that two sentiments should move England to cause the South African native to change his ways. The first is the sentiment of chivalry, which, under no conceivable circumstances can countenance voluntary female slavery. The second is contained in the aphorism "If a man will not work neither shall he eat." The Kaffir must be made to think that he ought to

**An opinion.**

## NATIVES

have this or that in order to become a personage ; and he will work for the means to buy it — says the *Pall Mall Gazette*.

The people of South Africa are confronted by the very difficult task of educating the people of England into a proper appreciation and understanding of the South African native. When England knows, no nation possibly can make a better or more practical use of knowledge : but it takes a very long time and an infinity of pains to make Her know. A most remarkable ignorance at present is exhibited by England in connection with this burning question. Experience gained during the last Campaign, the personal acquaintance of hundreds of thousands of Englishmen with South Africa and its population white and black, ought to have dispelled the mists of many delusions. But such is not the case. England knows that the native makes no objection to working for the military : but She does not know — at least, She does not realize, yet, why ? The native, in fact, was over-paid, over-fed, petted and pampered beyond all reason. Naturally, he took all he could get ; and naturally, he now asks for, expects, and demands, more. Juvenile officers, who had no experience in dealing with barbarians, or any other vital matter, (not to put too fine a point upon the fact,) thought the native a very amusing fellow ; described him in letters home as being not at all a bad sort of blighter. They proclaimed their astounding discovery that the native did not seem to care a bit about the rain (as though any one does in South Africa!) : that he was a splendid man to look after horses or to drive mules : that he could handle a whip, and use it with a vengeance, that, in fact he was a very good class of man all round ; and that it was an abominable thing that he should be so infernally badly treated as he was by people who did not understand him as the writers did. Let it not be thought that I am gibing at the

**England  
must be  
educated.**

**English  
delusions.**

**Juvenile  
baldordash.**



## SOUTH AFRICA

**Confusion  
of the Ideal  
with the  
Real.**

good feeling and exuberant philanthropy which inspired these dithyrambics. I simply say that I look upon the matter from another point of view ; and I totally disagree from them. There has been so much writing, of the style which I have described above, and so many rose-coloured stories told of the nobility (and all the rest of the virtues) of the South African barbarian, that great harm has been done by confusing the Ideal with the Real. The Ideal, I hope, has had its day. The hour for the revealing of the Real is yet to come. The time is not ripe. Something remains to be done. The first thing is to inspire the native with a true conception of his actual position. That will take time. The native will not easily forget that, only a little while ago, he was a pet in receipt of four shillings a day, while Tommy Atkins was a hero in receipt of one shilling a day. Which is absurd.

**Criminal  
Absurdity.**

**Miscon-  
ception  
augmented.**

Deliberate mendacity in many, ignorance in more, fatuous stupidity in most cases, have augmented the evil from which the whole white population of South Africa is suffering. The late Campaign by no means has improved the native. It has put back the clock of his civilisation by a decade. It has nearly ruined him. This native question ought to be placed fairly and squarely before England : for, *to continue to champion insolent indolence, simply because it happens to be black, is ethically wrong, and nationally cruel to industrious intelligence which happens to be white.*

**An opinion.**

**The inevit-  
able alter-  
native.**

This is certain. If there be much more "parish pump and platitude" interference by England with South Africa's administration of her natives, every white man in that country will combine to make Black Labour the question of the day. It will be the one question above all questions which will place Imperial Rule in South Africa in the balance. The colonial, the new-comer, the Dutchman, are all of one mind in this matter. The workers will not tolerate the drones

**South  
African  
Unanimity.**

## NATIVES

much longer in the hive. Judging from the white man's present attitude, and that of the insolent Kaffir who has been persuaded to claim equality with the white man, a crisis cannot be far off. Till then, the South African farmer must struggle-on as best he can. He will not have to struggle long.



## The Boer

**T**HE Boers are products of evolution. Their original ancestors landed in South Africa from the Netherlands in 1652. Since then, a continual influx of English, French, Germans, and other nationalities has taken place. Intermarriage, of these with the Dutch, involved surrender of customs, habits, language, and religion. The conditions of life in the country also have done much to fuse and weld and blend these heterogeneous particulars into an homogeneous whole ; and this is the Boer Race, the Dutch of South Africa, which, however, has in reality but few of the characteristics of the Dutch of modern Europe.

**Origin.**

The Dutch may be roughly divided into two sections :—

**Species.**

- (a) those who are loyal and have remained loyal to the English Crown :
- (b) those who never have been loyal, and who (probably) have no intention ever of being loyal to the same Sovereignty.

But, since the Transvaal and the Orange River Colony have been added to the Empire, it is only fair to consider their inhabitants as being, equally with us, subjects of the King's Majesty. The hatchet has been buried, it is to be hoped, for ever. All that remains to be done is to improve the acquaintance of our new fellow-subjects. Hence it is the farmers in particular, and the Boers throughout South Africa in general, who form the subject of these present pages.

## SOUTH AFRICA

**Erroneous  
views.**

Much has been written and much has been said about the Boers. It would have been better for the country's welfare, if tongues had been silent and pens still. There has been too much of a tendency to compare Boer vices and defects with English virtues and gifts ; and not sufficient justice to give the other side of the picture.

**Primitive,  
pastoral,  
patriarchal.**

Generally speaking, the Boers are essentially primitive, pastoral, patriarchal, in their ways and in their character. I suppose it will be argued that this description is incorrect : because of the notorious " slimness " of the Boer, which is not usually associated with the patriarchal, the pastoral, or the primitive. But the primitive pastoral patriarch Abraham was " slim " in that he lied (*Genesis xii. xx.*) ; and the primitive pastoral patriarch Isaac was " slim " in that he lied (*Genesis xxvi.*) ; and the primitive pastoral patriarch Jacob was " slim " in that he cheated (*Genesis xxvii. xxx.*). Therefore, it may be inferred that " slimness "

**" Slimness " compatible  
with above.**

is not incompatible with primitive pastoral patriarchality, either in the case of Abraham, Isaac and Jacob, or in the case of the Boers of South Africa. The fact is that every human being is " slim " more or less in his degree.

**Why the  
Boers are  
slim.**

The " slimness " of the Boers is due to many causes : chiefly, I believe, to the ignorance which is born of isolation. The Boers will not live in cities. Community life has no charm for them. Only for the purpose of attending religious services will they condescend to join house to house in their *dorps*. They live as much as possible alone and independently. The habit of solitude (if I may adapt the words of Robert Louis Stevenson) tends to perpetuate itself ; and a quite unconscious austerity, and a pride (which seems to be arrogance and most likely is chiefly shyness) discourages and offends those who fain would be companions. Enclosed within the walls of his own personality, the individuality of the Boer broods in a kosmos of its

## THE BOER

own. Beyond these walls are strangers, only strangers ; and "strangers" and "enemies" always have been synonymous in the uncultured mind. Herein I think, we get down to the root of the Boer's "slimness." He looks upon all outsiders as being likely to do him an injury ; and, with the universal human instinct for self-defence, he gets his blow in first. The Boer is not a creature of civilization. He is the Twentieth Century version of the eremites of the Thebaid. The streams and the qualities of the soil have led him out into the desert : they have been as the guiding angels influencing his choice of a dwelling-place in the wilds.

**Stranger-Enemy.**

The Boers often have been arraigned on a charge of innate cruelty. Sometimes the charge is just : sometimes unjust. It must not be forgotten that their long familiarity, with savages and pests and diseases, — with hideous cruelties often inflicted on them by savages who gave no quarter, with the continual struggles with wild animals and noxious insects, with inexplicable and (by them) incurable animal-diseases as well as with adverse climatic conditions, — has had the inevitable effect of rendering their nature callous, and incapable of the finer and more delicate sensibilities. Their aloofness and their spontaneous cruelty is the result of the life to which they and their forefathers were exposed in the early days. Black men to them were an inferior race, to be forced into servility : cattle and sheep were so much beef and wool : both mere flesh, looked-upon as being no more than the every-day weapons to be used in fighting the battle of life, to be cared for when likely to be useful : but never to be spared or considered.

**Charge of cruelty.**

**Callousity.**

The Boers are devoutly religious. Some people, who think that church-going to a great extent is a matter of social gathering, may be inclined to doubt the fact. However, the Boers are terribly in earnest. Their profession of religion is something infinitely more tangible, more intimate and real, than a merely social ordinance.

**Devoutly religious.**

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**Old Testament Religion.** Their religion **certainly** partakes more of the Old Testament character than of the New ; and, although they believe and accept the latter, it is the former which they follow and practise in every-day life.

**Character formed by circumstances.** It is easy to condemn these simple and (in many cases) ignorant people. It is easy to condemn them as stock-farmers, or as cultivators of the soil. It is easy ; but unsafe. There are sermons in stones. Every *kopje* and every expanse of veld tell the story of the evolution of the Boer character. Wherever the country-rock out-crops, there an intelligent and sympathetic observer may read Nature's bald concise summary of the history of South African farming — the past history, certainly ; and, almost as certainly, the history of the future. As an agriculturist, the Boer is what the country has made him. The soil is indifferent : it has made him an indifferent farmer. He has tried energy : the soil has failed to abet, and the climate has nullified, his efforts. He has adapted himself to his limitations ; and has become what he is, under the inflexible operation of natural laws. But he has learned much of positive value. He is an ideal pioneer.

**An indifferent farmer.**

**Ideal pioneer.**

**Agricultural Autolytus.**

He has a natural eye for country. He is a born "selector." He is an adept agricultural prospector. There are, I understand, mineral-prospectors who almost can be said to have the power of smelling-out a pay-reef. The Boer possesses a similar faculty for the discovery of alluvial soil-deposits. These, as a rule, are small in number, limited in area ; and they are widely scattered. But the Boer has found them. He is the agricultural Autolytus, "a snapper-up of unconsidered trifles." Having found these valuable spaces, he has appropriated them to himself. Now he owns them ; and betrays no disposition whatever to part with them. The Englishman has come into the country in search of gold and diamonds. To him, the Boer has sold his agriculturally worthless tracts of

## THE BOER

veld, for gold and scrip. With these proceeds, he not unfrequently has entrenched himself in some distant spot which has even greater agricultural possibilities. And thus the Boer of today owns those portions of our newly acquired Colonies which are the permanent source of the wealth-producing power of both the Transvaal and Orange River Colony.

**The Boer owns the permanent source of wealth.**

The former Boer republics, while jealously guarding their land, customs, and institutions, invariably welcomed new-comers, no matter whence they came, who showed a disposition to settle on the land. A few of them, Englishmen or Scotsmen, still remain : but the majority were satisfied with the experience of a few years of South African farming. That experience was often a bitter one. The faithful remnant which clung to the land, sooner or later assimilated their system of farming to that of the Boers, simply from force of circumstances ; and they achieved a certain measure of success. Further, they themselves, gradually and perhaps subconsciously, have acquired the Boer spirit. Soil, climate, environment, have combined to shape and mould this adaptable material, until in effect it has become part and parcel of the Boer nation. I have not noted similar adaptability on the part of the aboriginal Boer. I have not observed a single case where the Boer has discarded completely his system of farming, mode of living, or any other of his traditional characteristics, in favour of a different one, not even when such difference would have been profitable. Yet, as a farmer, I consider the Boer to be a fairly intelligent man. He certainly compares very favourably with other nationalities in out-of-the-way districts, even in England, Wales, and Scotland : while he is far ahead of the Irish tenant-farmer. But the Boer is not an agriculturist pure and simple. The basic conditions of the soil is the element of compulsion, which has forced him to adopt a pastoral occupation.

**Former Settlers.**

**Their adaptability.**

**Boer rigidity.**



## SOUTH AFRICA

**A comparison.** As compared with other countries which have been peopled by Europeans, South Africa is an old settlement. The Dutch settled in the country in 1652. Canada had a settlement in 1608; New Zealand in 1773; Australia in 1788. These latter colonies, although established many years after the Colonies of South Africa, have made immeasurably greater progress, not only in agriculture, but, in every other industry.

**Slow progress in South Africa.** No better colonists ever left European shores than some of the Dutch, and the Huguenots who followed them to South Africa. They were sound practical brave and determined men. One would have expected them to make enormous headway. Yet their progress, as measured by the progress of colonists in other parts of the world, has been little short of contemptible. If the same men had emigrated to Canada, New Zealand, or Australia, is it not possible that their progress in those lands would have been much greater? I believe that it would have been very much greater. And I also believe that the original settlers in Canada, New Zealand, and Australia, never would have done in South Africa what they have done in Canada, New Zealand and Australia. The fundamental fact of the situation lies in what I already have said about the soil, climate, and physical configuration of South Africa. It is this irresistible combination of antagonistic forces which has moulded the character and disposition of the Boer, and governs all farming operations of South Africa. It will mould all men who come under its influence. Nevertheless, progress in husbandry is possible. It will be slow. Farmers must learn to help themselves and not to trust to circumstances. In some respects, the so-called unprogressiveness of the Boer may be ascribed to the presence of noxious insects, and to the prevalence of peculiar diseases. It is conceivable that, during two years out of every three, a chemical blight

## THE BOER

might operate within the bowels of the earth, under the influence of which each molecule of gold, present within the Rand and other gold-reefs of South Africa, would degenerate into lead or iron : but it is not conceivable that, under such circumstances, the gold-mine owners and financiers of South Africa would be distinguished (as a body) for that superior quality of progressiveness with which their name at present happily is associated. The Boer, as a farmer, has grown hardened to the spectacle of ruinous loss inflicted without a moment's warning. He is accustomed to see his year's labour swept-away in a night. When he sows he has no certainty of harvest. Therefore, we must give him the credit at least for patience, if not for intelligence. Those who have actually lived on, and have wrenched a livelihood from, the land in England, in Canada, in Australia, and certainly in Africa, and who perforce have had to trust in wind and rain and sunshine and freedom from pest and plague, ought to be able to appreciate the meaning and the causes of the unprogressiveness of the Boer.

**A parallel.**

**Why the Boer is unprogressive.**

With all their defects, the Boers after all are a steady-going element in South Africa : an element which will become more appreciated in the future than it now is. This element, blended with the resourcefulness of the colonial, and the vigorous inventive progressive inclinations of the new-comer, will have far-reaching results in the formation of the Afrikander Race of the future. There was a tendency in this direction before the War. Amalgamation and assimilation were becoming stronger than disintegration. The present moment is the moment of reintegration.

**A steady-going element.**

The Boer is not doomed to extinction, or to play a minor part in the administration of the country. He has qualities of great determination. He may not adapt himself readily to his new circumstances : but, when he finds it to be necessary, or to his advantage,

**Not doomed to extinction.**

## SOUTH AFRICA

he will not hesitate about changing the old order for the new. Although slow in his nature, he has immense vitality. So strong and powerful a frame as his is not to be seen in many countries. His patriotism is undeniable: his code of honour — well, perhaps that (at present) is peculiar. He is great at arguments; and, when facts go against him, it is the facts which suffer.

**Boer capabilities.**

His most striking feature is his hospitality; and his strong redeeming point is that he harbours no revengeful feelings. He is a very handy man. I have seen him make his own saddlery and boots, make and burn his own bricks, act as his own carpenter, and build his own house. He shoes his own bullocks in a rough but distinctly clever style. And his wife makes his clothes. The wants of the Boer are few and simple in comparison with those of an English settler. The more one sees of the old-fashioned Boer, following his ordinary every-day life — the more one studies his methods, primitive though these may be — the more closely one comes in touch with his character, his patience, his love of solitude, his hospitality, his self-reliance, his hopeless resignation to what he considers to be Heaven's Will, — so much the more complete and substantial becomes the appreciation of the new-comer for the sterling qualities of this somewhat strange product of the South African veld. The Boer is a part of the land. He is attached to it, to the land, a land, not any particular land. His attachment does not spring from old association: for he has been so accustomed to move-about, trekking "to fresh woods and pastures new." But his attachment to the land is associated with the political power which he derives from its possession. His life, on the veld as a stock-farmer, inclines him to go-on for ever in the same old lonely furrow, to condemn new methods connected with farming, or with personal advancement. But as things move-on, so will the Boer

**A part of the land.**

## THE BOER

move-on. He does not believe in what he cannot see. To make him see what is to his advantage, is the task of those who are interested-in, or responsible-for, the people and the future of South Africa.

**Future  
prospects.**

Yes. The Boer is well worth watching. Indeed, he *needs* watching — in more senses than one — and all the time.



## Cape Colony

**C**APE COLONY has an area of about 276,000 sq. miles. It includes several native territories.

The surface exhibits a series of sandstone plateaux, which rest on and are intersected by granite and metamorphic rocks. These plateaux rise in terraces from South to North, attaining an elevation of two, four, or (in some cases) six thousand feet above sea-level. They take the form of rocky walls and flat-topped mountains, riven by narrow ravines or *kloofs* which form a means of passage. Their flatness is flat only in comparison with the precipitous nature of the country: as a matter of fact the surface of these plateaux usually is much diversified by minor irregularities and undulations.

The rainfall is very varied. At Pella, in the North-West of the Colony, it averaged last year 1.27": while on Table Mountain at Capetown the average was 60".

Cape Colony is very badly supplied with natural water-courses, except in some small areas. The Orange River, which divides it, is the chief river: but little use so far has been made of it for artificial irrigation. Its tributaries, the Hartz, Reit, Modder, Molopo, Hartebeeste, and Ongars, are more or less merely torrential streams. The same may be said of the other rivers which flow southward, the Brede, Gambos, Gowitz, Sundays, Kel, and Fish.

Although most of these latter rivers are extremely

**Area.**

**Surface.**

**Rainfall.**

**Rivers.**

**Irrigation.**

## SOUTH AFRICA

irregular in volume, varying from foaming spate in the wet season to rippling rivulet in the dry, useful irrigation works have been erected on some of them ; and much more could be done by judicious expenditure. The river-valleys are very fertile ; and, where systematic irrigation is instituted, the price of land has gone up from a few shillings to anything between £20 and £100 an acre. There is a very fine irrigation scheme carried out on the Gambos. As the demand for irrigated land is on the increase, it is to the great advantage of speculators and investors to turn their attention to the possibilities here indicated.

**Climate.**

The low country, or seaboard, of Cape Colony differs in many respects from the interior. Rains fall copiously in winter : while the summer months are comparatively dry.

**Its effect on  
vegetation  
and in-  
habitants.**

This belt is marked by the peculiarity of its vegetation, as well as by the character of its inhabitants. The former naturally is affected by the sea-breeze, the maritime climate, and the lower situation. The latter are more urban and nautical than agricultural in their pursuits. Both whites and natives exhibit a much greater admixture of race than is notable among the inhabitants of the interior.

**Cape Colony  
Farmers.**

The Englishman has not taken-root in the country, as the Dutchman has. Great numbers of the more energetic of the settlers, from 1820 to the present, always have tended to drift into some trade or profession. The less energetic and enterprising, original settlers and their descendants, have remained on the land in the Eastern Districts. They are very worthy people, quiet, simple, and passionately loyal. But in the struggle for life they use the methods of the last century. Still, there are some notable exceptions to that rule ; and among these I will name Mr. Southey of Culmstock, Mr. Arthur Douglas the founder of Ostrich-Farming, and Mr. Hilton Barber. There are

**Exceptions.**

## CAPE COLONY

also many others, all keen modern men of the twentieth century. The more old-fashioned farmers sometimes succumb to the temptation to let their lands to native tenants. On their rents, they live in inglorious ease in Grahamstown or eastern village-towns. The best of those, who continue to farm their own acres, occupy the highlands from East Griqualand north-west to the Northern frontier. They are almost exclusively stock-farmers. Down in the south-east of the Colony, it must be admitted that Nature seems to be inimical to the white man. That is why things seem to slip back to the system of native occupation. The country is not a wheat country. It is a mealie country. And that puts the case in a single husk.

The finest farmers are the great midland wool- and mohair-farmers. A line from Cradock to Port Elizabeth strikes their country. They are chiefly Dutch : but, as a class, they are far in advance of the mere stock-raisers whom I observed in the Boer Colonies. It goes without saying that a man must have command of capital, and must be possessed of considerable technical knowledge, before he can become a successful wool- and mohair-farmer. Most of these men are undoubtedly rich.

The Karoo sheep-farmers are not so wealthy : but, strange as it may seem, sheep thrive better among the dry Karoo bush than on succulent grass. Cape Colony does a great export trade in wool and mohair. I was surprised to find, in the London Market, that the price of Cape wool was much lower than that of Australian and other wool. From expert replies to my inquiries, I was told that some of the Cape wool was excellent and equal to any wool grown elsewhere : but that the packing and the grading of it left very much to be desired. Now South Africa never has had a good reputation for its wool. Some of the farmers shear every six months : some, every nine months : others, every twelve months.

**Character-  
istics of  
original  
settlers.**

**Native  
occupation.**

**The finest  
farmers.**

**Wool and  
Mohair.**

**Karoo sheep.**

**Export of  
Wool and  
Mohair.**

**Low  
London  
prices**

**Bad pack-  
ing and  
grading.**



## SOUTH AFRICA

**Causes of  
above.**

It is by no means uncommon to find, in the bales on sale in London, three or four different classes of one quality, short wool, long wool, clean wool, clips of wool full of dust and sand and weeds, all mixed up together. Is it conceivable that any buyer requires or can use a picturesque gallimanfry of this kind? It is worth no one's while to purchase South African wool at a good price under these conditions: because of the extra trouble and expense entailed in sorting and classifying. The buyer of a bale of South African wool probably can use only one of the four different qualities of the wool which it contains. Let us say that he takes the long staple wool. Then he has to find a buyer for the short clean wool; and another for the long dirty wool; and yet another for the short dirty wool. And then the sorting has to be done by skilled hands. Naturally the London buyer of Cape wool pays a low price. The small dealers in wool in Cape Colony buy direct from the farmers, at a price which leaves a margin for them. They lump their purchases into such bales as I have described; and, when these are offered for sale in London, they do infinite damage to the better-class farmers who have graded and packed their wool with proper care. South African farmers would do well to give their individual attention to this matter. They need not be ashamed to take a lesson from Australia in regard to the grading and packing of their wool. Let the farmers of each district combine. Let each combination procure a wool-sorter or grader who is thoroughly up to his work. Their wool would attract greater attention, and produce a better price, for the Merino-Sheep, which produce the wool in South Africa, are as fine as any sheep of their kind in the world. All the above remarks are to be taken as applying to mohair-goats as well as to merino-sheep.

**New system  
recom-  
mended.**

**The  
Western  
Province.**

The West (Paarl and Worcester) is one vast garden. Here, the wine-farmers are beginning to pay attention to

## CAPE COLONY

the teachings of the expert. The Rhodes fruit-farms are known to be a great success. There is a growing trade in fruit not only with South Africa generally, but also with the Mother-Country. The small farmers of Albany grow fruit at a profit for northern markets. The one thing which strangles the prosperity of East and West, of Dutch and English, is the lack of sufficient labourers. I was astonished to see how few farmers have vegetable-gardens at their homesteads. It was quite unusual to find any sort of cultivated garden. A few second-rate peach-trees grown from pips were the only things deemed worthy of consideration by many farmers. But wherever, in the Eastern or Western provinces, a good garden was to be found, it invariably followed that the farmer, who well-tended his garden, also well-cultivated his farm.

The Western province of Cape Colony may be taken as the centre of the cereal industries. The soil is very diversified in character, and in agricultural value. Most of it is light and shallow. Yellow and brown sands and clays, with a large percentage of gritty and gravelly matter, predominate. They are poor in organic matter : rich, in inorganic. Lime is plentiful in some districts, e.g. Piquetberg. The surface-soils rest on an inferior subsoil, sometimes of porous sand or gravel, through which water too readily percolates : sometimes of stiff clay, more or less impervious. Wheat and oats are grown on an extensive scale without irrigation. The risks of harvesting and rust are not quite so great as in other parts of the country : because, here, the rain falls in the winter instead of in the summer. The system of cultivation is primitive. Successive crops are grown, until the land is exhausted. It then is allowed to lie fallow ; and soon becomes covered with indigenous scrub. After two or three years, this cultivated land degenerates into an uncultivated wilderness. For this reason, the crops

**A garden.**

**Successful  
fruit-farms.**

**Lack of  
Labourers,  
and vegetable  
gardens.**

**Soil.**

**Smaller  
risks of  
climate.**

**Primitive  
system of  
Agriculture.**

## SOUTH AFRICA

<b>Consequent deterioration.</b>	become lighter year by year ; except in a few rare instances, where the farmer scientifically maintains the fertility of the soil. The general rule, however, is that the cropping period is getting shorter and the resting period longer. Almost all the crops are sold off the farm every year ; only in very special cases is anything brought back to the soil. The real agricultural value of land in the Western Province must be much less than it was twenty or thirty years ago : while its present market-value is greatly increased.
<b>Farmers live on their capital.</b>	These facts point to an inevitable conclusion :—The farmers have been, and are, living on their capital, i.e. the inherent properties of the soil. Wheat-culture would be impossible under this system of farming if it were not for the Protective Tariff of 4s. 6d. a hundred pounds, equal to 20s. a quarter. Farms vary both in size and quality. It would be difficult to buy one in this province at anything like its intrinsic value.
<b>Rhodes' Fruit-farms.</b>	Fruit is the staple industry of the Paarl and Stellenbosch divisions. The late Cecil Rhodes successfully established several fruit-farms and vine-yards. I have not seen the quality of their produce equalled elsewhere in Cape Colony ; and their system and general management leaves nothing to be desired. A great outlay of capital was requisite for the establishment of these farms : but the investment should prove profitable. Many experiments had to be made for the proving of certain theories, and the disproving of others.
<b>Cause of Success.</b>	The neighbouring fruit-farmers have the benefit of these experiments, which were carried out, as it were, at their very doors. Land, which would be considered unreasonably dear for agriculture or stock-farming, would be cheap at the price for fruit-culture. There is in England an increasing demand for Cape fruit. This market, if it be judiciously nursed, should prove a great source of revenue to Cape farmers. To men who wish to settle on the land in Cape Colony, scientific fruit-
<b>Indifference of neighbouring fruit-farmers.</b>	
<b>Scientific fruit-culture a source of revenue.</b>	

## CAPE COLONY

culture offers the most favourable prospect : or at any rate as favourable a prospect as any other farming industry. Capital of two- or three-hundred pounds would give a man a fair start ; and, with ordinary luck, considerable headway could be made. I wish to limit this opinion to the fruit-district of Cape Colony, where climate, soil, and rainfall are suitable to such an industry.

The Eastern Province of Cape Colony has a variety of soils. The farmers are inspired by very progressive ideas. This is not strange considering that many of them are descended from the original settlers of 1820. In the north-east district, it is chiefly pastoral. Except in the valleys, the soil is very sandy, and, therefore, unsuitable for cultivation. Toward Queenstown, the cultivated areas are much larger than elsewhere, and the stock of a higher grade resulting from careful breeding and judicious crossing. In winter, stock is well provided with forage, which is grown under irrigation. The soil is good, and suitable for irrigation ; but water is very scarce. The grass improves towards the north. Some districts, such as Woodhouse and Barkly East, have a higher elevation above sea-level ; and, consequently, their climate is much colder. Root-crops grow well : nearly all the cereals are grown without irrigation. Angora goats are a notable feature in the stock of this province : they do remarkably well in most districts.

There are many farms, especially along the eastern boundary (Griqualand and New England), which would be advantageous for English settlers. Such emigrants would feel more homelike here, surrounded (as they would be) by English neighbours ; and their general knowledge of farming would be more useful to them than in other parts of the colony. Farms vary in price, as well as in size and quality. Owners of good farms will not part with them except at long prices.

**Amount of capital required.**

**The Eastern Province. Progressive farmers.**

**General description.**

**Stock.**

**Roots and Cereals. Angora goats.**

**Districts suitable for English settlers.**

**Prices of farms.**

## SOUTH AFRICA

The average price is £2 - £5 an acre ; but irrigated land costs £10 - £25, and upward, an acre : while dry and scrubby veld goes begging at 5s. - 10s. an acre. The land varies from arid plains to most fertile valleys : therefore it is not possible to quote an average price. Each farm must be estimated on its own merits.

**The Mid-  
land  
Province.  
Surface.  
Torrential  
Rivers.**

The Midlands of Cape Colony includes every kind of land, from dry Karoo to rich pasturage, from low valleys to high mountains. There are few districts where cereals will grow without irrigation. Most of the rivers are torrential ; and the conservation of their waters is expensive. Some few progressive farmers, however, have succeeded in bridling the torrents in their land : consequently they reap rich harvests.

**Suitable for  
stock.**

The Midland farms being most suitable for stock, the farmers chiefly engage in that branch of farming. Agriculture is pursued more for home-consumption than for the market.

**Soil.**

The ordinary soil is red, rather light in colour, and much of it is unsuitable for vegetation.

**Poisonous  
weeds**

Poisonous plants are numerous : one called *Stink-blaar* is very common. The land surface is much broken ; and, in some parts, very stony.

**Graaf  
Reinet  
District.**

The Graaf Reinet district is noted for its oat-hay, which undoubtedly is the best produced in South Africa. Here, the farmers are men of substance, owning large flocks and herds. The Sneewberg Range in this vicinity affords excellent grazing for stock, and is fairly free from disease.

**Drawbacks.**

**Prickly  
Pear.**

The Prickly Pear, a most objectionable shrub, is spreading in an alarming manner all over the country. It is especially prolific near the coast. Baboons and jackals also are very troublesome. It is no uncommon thing to see a shrewdness of 100 - 200 baboons on the mountain sides. At night, they descend and do great damage to the crops. Jackals also cause serious losses to the farmers, killing hundreds, nay thousands, of lambs

**Baboons  
and  
Jackals.**

## CAPE COLONY

each year. It is time for the Government to come to the farmer's assistance in this matter : for he has too many other enemies and disadvantages to combat ; and he ought not to be left to bear loss caused by noxious vermin which, by united effort authoritatively directed, could be exterminated.

**Necessity  
for  
Government  
action.**

One of the most scientific farmers in the Midlands, whose enterprise has proved successful, is Mr. Hilton Barber. He has tilled and irrigated his lands on modern methods : his stud of horses, droves of cattle, flocks of sheep, and ostrich-farm, have been managed with great ability and discretion. The same also may be said of Mr. Hall of the Willows, of Mr. Southey of Culmstock and his brother. The former has established a good strain of Devons : while Mr. Booysen of Graaf Reinet is a notable breeder of Jerseys. These gentlemen and many others whom I met in South Africa have made farming profitable : but their antiquated and non-progressive neighbours have learned little from them, preferring to plod on in their primitive system of the day before yesterday.

**Some  
scientific  
farmers.**

**Mr. Hilton  
Barber.**

**Mr. Hall.  
Mr. Southey.**

**Mr. Booysen.**

The fact, that very large farms often have very little water, causes them to carry only a small quantity of stock ; and this is one great trouble of the Midland farmers. Lucerne flourishes luxuriantly wherever it is grown under irrigation. Ostriches feed on it ; and, indeed, all stock thrives on this wonderful fodder. The evil of over-stocking is manifested clearly in many parts of the province. It is aggravated by grass-burning, depriving the beasts of nutritious herbage which generally and speedily is replaced by an obnoxious weed. Where the veld has become impoverished, the sheep get into poor condition ; and, being without artificial food or shelter, they die in hundreds during inclement weather. In a few districts, I noted that the natural grasses had been grazed to the roots in the dry or drougthy season, and were dead ;

**Large Farms  
carry small  
stock.**

**Lucerne.**

**Evils of  
over-  
stocking.**

## SOUTH AFRICA

while the weeds, which took the place of the dead grass, were thriving apace.

### **The Karoo.**

The Karoo, usually divided into Southern, Centre, and Northern, is an enormous tract of uninteresting country, barren mountains, riverless channels and excessive aridity. It bears a variety of succulent plants and bushes and prickly shrubs : but no grass and no trees. It is intersected by ironstone *koppies*, which reflect the sun's heat in a most amazing manner. It would be difficult to imagine a more desert-looking country, especially during drought and scorching heat : yet a few days of rain will transform it into a veritable flower-garden, giving pasture to millions of sheep, which travel for miles from the homestead in search of food. But so agreeable a change seldom comes ; and is of but short duration. The Karoo is a feast-or-famine country for stock ; and famine is the rule.

### **A "feast and famine" country.**

### **Soil.**

### **Climate.**

It is difficult to quote an average of the prices of Karoo farms, owing to the uncertain distribution of water. But the soil of this arid province can be classed amongst the richest in South Africa ; and, where there is water, it has unequalled fertility and reproductive power. The air is unsurpassable in its clear brilliancy. The winters are dry : the days being warm, and the nights cold, with the thermometer often falling below freezing point. As the stock-carrying capability of the land is small, the farms naturally are very large. The Districts of Beaufort West and Victoria exhibit some fine flocks of sheep. The newcomer finds it hard to realize that people live in happiness and comfort on the lonely expanses of the Karoo ; and he is still more astounded when he hears the inhabitants declare that they would not exchange their bush-land for the finest grass-district in the country. For the Karoo farmers are passionately enamoured of their landscape, their shrubs, and their lonely life. Theirs is an acquired taste ; and, like all acquired tastes, it is immutable.

### **Love of old inhabitants for the Karoo.**

### **An acquired taste.**

## CAPE COLONY

A single life-time would hardly suffice for its acquisition : but when it is inherited and also cultivated, it becomes characteristic and habitual.

The North-western province of Cape Colony includes a large and varied area. The soil is dry and generally poor. The rain-fall is uncertain. Mr. E. G. Alston, a practical farmer in the Carnarvon district, has been successful in cultivating the Australian salt-bush, a most valuable drought-resisting shrub.

Nothing of any importance, however, can be done in this province, without irrigation and without better facilities for transport. As things are at present, it is not profitable to grow cereals of any kind except for local consumption. Many suitable sites for irrigation works exist ; and will continue merely to exist, until individual enterprize exploits their possibilities. With reference to the question of transport the following instructive incident merits consideration. A certain agriculturist in the Calvina district, had found himself unable to dispose of his produce. During the War, a column, under Colonel Haig, came into the neighbourhood, engaged in clearing the country of all grain, fodder, etc., which could be found in store. On the farm of which I speak, they found the accumulated produce of *nine years*. When asked why he had hoarded so enormous a quantity of wheat, the farmer responded that he could not sell it, because there was no demand for it in that locality ; and that to transport it to the nearest town or railway station would cost more than the market-value of the grain !

The North-western district holds out little or no hope for the English settler. A life-long experience is necessary to study the natural conditions ; and to become habituated to the "feast-or-famine" vicissitudes of agriculture and pasturage which are characteristic of the country. At the moment of writing, I find my opinion corroborated in the following cable from

**N.W.  
Province.**

**Soil.  
Rain-fall.**

**Salt-bush.**

**Lack of  
irrigation  
and  
transport.**

**An in-  
structive  
anecdote.**

**An opinion.**

**Corrobera-  
tion from  
the  
Standard.**



## SOUTH AFRICA

the *Standard's* correspondent in South Africa :—

*"Flocks destroyed by drought in Cape Colony.*

"According to a Capetown telegram to the *Standard* the drought is so acute that, in the north-west of the colony, "sheep and goats are dying by thousands. The drought has "prevailed for two years ; and one farmer, who had 6,000 "sheep, now has fewer than 300. Another has lost 1,500, "all he possessed. There are no oxen left. There is no milk ; "and the mutton is practically uneatable. It is generally "believed that, if no rain falls by the middle of this month (Oct. 1903), famine will be rife, and the Government will "have to supply food-stuffs to the starving population."

Now it is in this very district that a gentleman, of a few months' experience in the country, has bought a large tract of land for sheep- and cattle-farming. It was his opinion that droughts, and other similar eccentricities of Nature, were either mythical or negligible. Needless to say, his proceedings under existent circumstances form the subject of interested observation.

**Heart-water.** Large areas of Cape Colony are infected with Heart-water ; and have become absolutely useless for sheep and cattle. These infected areas are spreading at a rapid pace. It behoves the Government to take active and immediate measures to counteract the pest : for the farmers are in terror lest their land should become infected.

**Government intervention necessary.** Cape Colony certainly can boast of possessing a competent government department of Agriculture. It has an experimental wine-farm at Constantia : an agricultural farm with competent staff at Stellenbosch : an excellent entomologist and bacteriologist : a fish-hatchery : a forest-department, with several nurseries ; and a practical veterinary department under Mr. Hutcheon, than whom there is no man, in all South Africa, more capable of dealing with the problem of animal-diseases alluded to above. I have studied many of his reports and recommendations. The adoption of these would give the country a chance. But I regret to say that Mr. Hutcheon is not supported by his

**Government department praised.**

**Mr. Hutcheon indispensable.**

## CAPE COLONY

Government. All the government departments are well-organized; their machinery perfect, their work worthy of attention and approval : but the Government is always plunged in "Bondism" or "Spriggism" or some other "ism"; and does not give its departments the free hand which is absolutely necessary.

**The Government's criminal apathy.**

**Valuable information easily obtainable.**

The Government publishes a valuable agricultural monthly journal, which is posted gratis to most farmers who apply for it. I was much struck by the practical nature of the information which was given so readily to me by government officials. Newcomers have no reason for complaining of lack of information : but they may well complain of the lack of good and available farms. This is not a fault on the part of the Government. It already has granted all the best land to settlers. The millions of acres, which the Government still possess, naturally are not as valuable as the land which has been disposed of. The early birds have caught the worms. Mr. Burton, in his interesting book *Cape Colony for Settlers*, which is issued by authority of the Government, makes the following conclusive statement :—

**All good farms granted.**

"All the most valuable crown-lands in the Colony have been parted-with under the various Land-Laws governing their disposal. The remaining lands are inconveniently situated on the flanks of mountain-ranges, and only valuable for grazing : or they are subject to periodical droughts, and offer very little attraction to newcomers."

I attended the Western Province Agricultural Show at Capetown in 1902. The stock exhibited was inferior, owing (no doubt) to the War and other causes. I particularly noted the cattle, of which there were specimens of several breeds. I was rather puzzled to find out the principles which had guided the judges in awarding prizes ; for, it seemed to me that points, plain enough to any judge of cattle, had been neglected. On enquiry, I received the following explanation :—

**An Agricultural Show.**

**Strange system of judging.**

## SOUTH AFRICA

"Our shows are considered more from the general public's point of view than from the Breeders'. If the public sees a big beast, he must be better than a smaller or a younger beast. So the judges go a little out of the way in order to please the public. Indeed, sometimes a good fancy colour alone will receive a prize."

### **An opinion.**

My informant, no doubt, either was ignorant of the facts or he deliberately was joking. At the same time, I must say that I learned nothing from my visit to the Show. Good points, in one class of cattle, were passed-over entirely in another. Without desiring to claim infallibility for my judgment, I can only say that, had I been judging, I should have selected some of the rejected cattle for prizes. They displayed points which no English breeder could possibly neglect. I am not an expert judge of horses; and, therefore, I am not able to comment on the merits or demerits of the awards in this division. But I maintain that, at all Agricultural Shows, the judges ought clearly to define those points on which they base their various decisions. The many Agricultural Shows, which are held in South Africa, should be held for the benefit of South Africa, that is to say for the farmers of South Africa, the class exclusively and vitally concerned; and they should not be held for the mere amusement of the uninterested and inexperienced public. An agricultural show ought to be an unique and splendid opportunity for the young farmer to acquire knowledge, or to improve what he already has acquired. To this end it is necessary that none but competent judges should be appointed. The present system does more harm than good: in that it discourages really experienced breeders from entering into the competition.

### **A recommendation.**

### **High Rail- way rates.**

Railway-rates are extremely high. The Government works the railway at a profit of 50% above working cost. Half the revenue of the Colony is derived from this source. At the same time, many privileges

## CAPE COLONY

are granted to farmers, of which the following may be cited as examples. Live stock, produce, and manures, are carried at a special rate ; and the Government will supply artificial manure to all farmers in the Colony at cost-price.

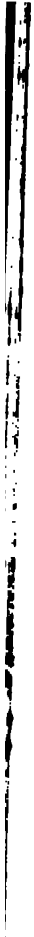
**Privileges  
to farmers.**

Taking one thing with another, there may be many worse places for the English settler than Cape Colony, when land can be bought for a reasonable price, which probably will be the case in a year or two.

**Conclusion.**

But it must never be forgotten that success depends on these six things in combination : (1) Price of land : (2) Supply of labour : (3) Capital : (4) Energy : (5) Experience : (6) Adaptability to Circumstances, or Ability to seize Opportunities and to make Use of Natural Conditions.

**The six things  
necessary  
for success.**



## Natal

**N**ATAL, commonly called, "The Garden of South Africa," with which Zululand now is incorporated, has an area of about 29,000 square miles. To this must be added 7,000 square miles of newly acquired territory on the Western frontier, which was ceded by the Transvaal in the re-arrangement of boundaries in 1902.

**The Garden  
of South  
Africa.**

**Area.**

The climate varies from the tropical on the coast, to the sub-tropical and temperate on the highlands, and again to the almost Alpine frigidity of the Drakensberg on the frontier. The physical conditions of Natal are not unlike those of the Eastern portion of Cape Colony : but its richness of soil, its well-watered valleys, its grand and picturesque scenery, give to this little Colony an unique position among the States of South Africa.

**Climate.**

The sea-board of Natal lies low : in some places it is swampy and sandy. A few miles inland, the country rises from East to West in a series of terraces each about 1,000 feet above the other, until the Western frontier is reached, where the Drakensberg Mts. tower like a battlemented fortress from 6,000 to 12,000 feet above the level of the sea. The coast-belt or lower terrace extends inland to a width of 10 to 16 miles. Its elevation averages about 900 feet. The second terrace, which is broader than the first, rises to an average of 2,500 feet. The third terrace, about 25 miles in breadth, has an altitude of about 3,500 feet.

**Sea-board.**

**Terrace  
formation.**

**Altitudes.**

## SOUTH AFRICA

	<p>The fourth terrace, which is a little wider than the third, ascends to about 4,500 feet. And the fifth terrace has an elevation of about 5,500 feet above sea level. This is the base of the Drakensberg mountains, which here soar in flat-topped <i>kopjes</i> and peaks, boldly standing out against the sky and defining the Western frontier of Natal. This range is of immense utility to the land in its vicinity, in that it forms a barrier which checks the moisture-laden clouds from the Indian Ocean, and causes the dispersal of their burden on the thirsty soil. But the Drakensberg also acts as a watershed. The rains which descend upon these mountains, form continuous streams across the Colony of Natal from its Western boundary to the sea. The benefit of this phenomena to the fertile valleys is not paralleled elsewhere in South Africa. Natal, therefore, has many rivers, the chief of which are the Tugela, Illovo, Umgeni, Umzunkulu, Umlass, with innumerable tributaries of permanent rivers and streams. Owing to the geological formation of the country in a series of step-like terraces, only one or two of these rivers are navigable for a few miles from the coast.</p>
<b>The Drakensberg as rain producer.</b>	
<b>Watershed.</b>	
<b>Rivers.</b>	
<b>Surface.</b>	<p>Like the rest of South Africa, Natal has large areas of granite rocks and soil. The railway from the coast to the interior, passes through huge mountains of grey granite studded with masses and boulders of enormous size. Further inland, and forming an actual part of the Drakensberg range, there are to be seen great horizontal sandstone beds in the shape of flat-topped mountains, a very characteristic feature of South African scenery. These are pierced and intersected by greenstone (trap) and metamorphic rocks at frequent intervals. The decomposition of the greenstone produces some of the richest soils.</p>
<b>Granite.</b>	
<b>Sandstone.</b>	
<b>Greenstone.</b>	
<b>Boulder-clay.</b>	<p>A notable feature of the geological formation is the boulder-clay, a bluish-grey argillaceous mass in which</p>

## NATAL

are embedded variously sized fragments of greenstone, granite, slate, quartz and other rocks. Dr. Sutherland has made a very interesting study of this conglomerate, tracing it for miles on the flanks of the red-sandstone hills, from the Tugela through the Beira range to Umbilo.

Limestone seldom is met-with except in the shape of occasional small nodular deposits.

**Lack of  
Limestone.**

The soil is generally deficient in lime and phosphates : but, owing to the great variety of rocks, there are very few sterile areas in Natal.

**Soil.**

Artificial liming has been tried ; and the results were not as satisfactory as had been expected.

**Artificial  
liming  
unsatis-  
factory.  
Valuable  
grasses.**

The grasses are very valuable. Both sweet grass and sour are to be found : but the former predominates. Its growth is generally thick ; and it is much heavier here than in other parts of South Africa. In the early summer, after the first rains, the grasses are intensely green ; and present an aspect of most brilliant verdure. They preserve their bright viridity, especially on the lower terraces, much longer than the grasses of other Colonies. Those of the higher terraces have the usual characteristics of South African grasses. They are of a dusky brown hue during the winter months ; and they are not very nutritious : but, when the rains fall, they very quickly change their sober garb for green, enlivened and bestudded everywhere with flowers.

The ill-effects of over-stocking may be noted in many parts of Natal. The indigenous grasses having been much damaged thereby, some farmers have sown imported grasses, which seem to be doing better in this colony than elsewhere, owing, no doubt, to the greater rainfall and humidity of the climate.

**Ill-effects  
of over-  
stocking.**

There is some valuable timber : but not an unlimited supply. The forests chiefly lie along the slopes of the Drakensberg Mts. Stinkwood, Mahogany, Iron-wood, and Sneeze-wood, are indigenous trees of the country.

**Valuable  
Timber.**



## SOUTH AFRICA

They are valuable for fence-posts, house-, wagon-, and coach-building.

**Great fruit  
Country.**

Every variety of fruit is grown most successfully. Bananas form the staple produce; and, for these, as well as a growing market in the Transvaal, there also is an increasing export trade. Pine-apples, Naartzes and Oranges are grown extensively. Natal offers many possibilities in the fruit-growing industry.

**Varieties of  
Climate.**

The climate is extremely varied. The natural system of terraces produces a great variety of climate.

At the coast, the heat is tropical and moist. Those who have visited Durban in December must have experienced its oppressive effect—the only drawback to what (otherwise) is the most delightful of South African towns. However, as it is only of brief duration, Durban may claim to have an almost perfect climate during 8 or 9 months of the year. Toward the interior the air is drier and more salubrious: while, on the Drakensberg frontier, snow and intense cold may be experienced. On the whole, the climate is warmer than that of adjacent colonies, which have the cool sea breeze from the Atlantic.

**High Veld  
for Stock.**

The Highland Veld is very suitable for cattle and horses. The latter thrive best on the highest elevations. Mealies, oats, manna, sorghum, are grown extensively all over the country. North of R. Mooi, tobacco, good wheat and other cereals grow well. A large number of farms on the western frontier are held by Orange River Colony and Transvaal farmers, who are obliged to trek from the high veld to these sheltered valleys, for winter grazing. Many districts

**Cereals.**

**Pasturage.**

**Sparsely  
population.**

exhibit rich soil and heavy grass, suitable for pasturage. Sheep and horses suffer from fever during the summer months: but in winter the place is healthy for all stock. At present, though it is capable of supporting a considerable population, it is but sparsely

## NATAL

inhabited. There are several small natural forests in this district.

Tongaat, Verulam, and Mount Edgecombe are the sugar-growing centres of Natal. This industry has struggled hard during many years for an existence: but now it is established on a sound and practical basis. Although Natal teems with natives, it has been found necessary to import coolies to work in the sugar plantations. There undoubtedly is in South Africa, a certain zone of elevation favourable for sugar culture. Its limits depend upon the conditions of moisture and temperature: the same industry, which promises so well in Natal, may be extended to a larger area in Rhodesia and Portuguese territory.

Sugar-culture should prove remunerative to the settler of small means, especially where crushers have been established. Even where there is no such establishment, the sugar-planter can purchase (at a very small outlay) such apparatus as would render him independent of the public crushers.

With its fruit-, sugar-, and tea-culture, Natal is capable of carrying a very large European population. Unfortunately, however, the Kaffirs (all able-bodied men) have been permitted to over-run the Colony and to occupy its best land. More unreliable and more indolent creatures it would be impossible to find anywhere. Their unwillingness to work has necessitated, and still necessitates, the importation of foreign labour (often of a very objectionable kind) wherever continuous and dependable work is wanted on the land, or in other industries. The Kaffir does a little stock-grazing and a little agriculture for himself; and is independent of everybody. The Natal Kaffirs are, not only a lazy and immoral, but also an impudent class, much under-taxed and pampered. They are the drones of South Africa. Their quantitative superiority must be reduced to the level of their qualitative inferiority.

**Sugar districts.**

**Remunerative Sugar-culture.**

**Population.**

**Objectionable foreign labour.**

**Denunciation of the Kaffir.**

**A suggestion.**

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No good can come from evading the conclusion that we are bound to deal with the Kaffir firmly, and even high-handedly.

**White people.**

The white population is chiefly English, with a large admixture of Dutch and German. Most of the Dutch engage in stock-farming in the districts of Biggersberg, Newcastle, Ladysmith, and Greytown. A German Settlement, which was established in the Colony many years ago, turned out most successfully : but this was due to the unfailing energy and resource which were displayed. The men worked better than any niggers ever worked. The women and children were in the field from early morn till late at night. They lived, in the most economical way possible, a life which few Englishmen would care to lead. They marketed their produce to the best advantage, saving every penny in order to add more land to their holding, and to fertilize the same with bought manure. Their sacrifices and their expenditure of energy in time became rewarded. Many of them are now among the leading farmers of the Colony, loyal adherents to the Government of the King's Majesty.

**White  
preference  
for com-  
merce.**

Other settlers have made similar attempts : many have failed for want of grit and perseverance. The general trend of the white population is toward the towns. The mercantile inclination proves stronger than the agricultural. Business of all kinds has been booming in Natal for some years. Much money has been made by tradesmen, builders, speculators. The Boer War certainly caused havoc throughout the country districts : but Durban and Pietermaritzburg reaped a rich harvest.

**Government  
Colonization  
Scheme.**

The Government of Natal contemplates a colonization-scheme. The Natal Land and Colonization Company which has been established for many years, was formed on commercial lines to meet the requirements of settlers. Intending settlers are offered land

## NATAL

from a selection of about 30 to 40 farms which vary from 1,000 to 7,000 acres.

These farms are scattered throughout nearly all the districts of Natal ; and there also are a few farms in the Orange River Colony and the Transvaal. The selected land will be leased to the settler for a term of years for agricultural or pastoral purposes. He will have the right of acquiring what is practically a perpetual lease at a price varying from 8s. 6d. to 28s. an acre. Occupation of the farm is compulsory. There are a many good points in the scheme ; but the price demanded is unreasonable seeing that many other parts of South Africa, especially Rhodesia, offer much better land at one-fourth of the price demanded by the Natal Land and Colonization Company. For the good of Natal, it is devoutly to be hoped that the Government will frame a Land-settlement scheme offering special inducements to intending settlers ; and that it will have cheaper and better land to offer than the Company here referred to.

**Natal Land  
and  
Colonization  
Company.**

**Unreason-  
able price of  
land.**

Mr. Struben of Capetown, in his evidence before the South African Land Commission in 1900, stated

**Evidence of  
Mr. Struben.**

“ that there was a quantity of land in the hands of the Natal Land and Colonization Company ; but that the Company “ get such good returns from rents paid by natives, that they “ have no particular inclination or motive to sell.”

In Natal and Zululand, the Government has at its disposal no less than 7,000,000 acres. It is possible that a large proportion of this vast area is suitable for European settlers ; and probably will be offered by the new Governmental Colonization-Scheme. It is estimated that the present area under tillage amounts to 700,000 acres. The natives cultivate a little more than two-thirds : the whites cultivate the remainder, growing Mealies and Kaffir Corn as their main crops. The coolies also cultivate much land in the Colony :

**7,000,000  
acres to let.**

## SOUTH AFRICA

they are gradually increasing both in numbers and in the extent of land which they farm. They pay high rents ; and often (I regret to say) are more acceptable as tenants than the whites.

**The Natal  
Government.**

**Fine Veteri-  
nary De-  
partment.**

**Government  
attention to  
details.**

**Its philoso-  
phic  
methods.**

**An example.**

The Legislative Assembly of Natal is unusually up-to-date in many respects, especially in its Agricultural Department. It has a capable Director of Agriculture, with a very competent staff. I believe I am right in saying that, although Natal has barely one-eighth the area of Cape Colony, its veterinary staff is equal in number to that of the latter. Every district in Natal has a Resident Veterinary Surgeon within reach of all farmers ; and his services are obtainable at a small fixed rate. Natal never has had more animal-diseases than Cape Colony (I doubt that it has had as many) : but then its equipment for dealing with the same is superior ; and disease of all kinds is checked or controlled much more satisfactorily here than in any of the other colonies of South Africa. But what strikes me as being the brightest and most shining characteristic of the Government of Natal is its perfectly astounding attention to details, which elsewhere would be condemned and shelved in silence. It really is amazing, in this age of inconsiderate hurry, to find a Government which has mastered the Aristotelean principle " Out of numerous particulars the universal becomes evident " and which philosophically progresses from little things to great, oblivious of mockery, and only anxious to carry out the people's will in the best possible and most expeditious manner. I will cite a single example. In 1902, the Government of Natal actually appealed to the country on the questions whether the railway-lines should be doubled for a certain distance : or whether a new single line should be constructed to meet the increase of traffic from the coast to the Transvaal. That this matter was, not only important but also, of great interest to

## NATAL

the inhabitants of Natal, may be judged from the fact that the electors (humorously or otherwise, I do not pretend to say,) returned the opposition with a majority of one ; and, consequently, the controversy continues still to rage. But what I wish to point out is that the Government of Natal not only represents the people of Natal in a parliamentary sense, but it has the confidence of the people, and the interest of the people, and in fact *is* the people ; and, therefore, no detail is too great or too small to be thoroughly examined by it *for* the people, in order that the whole welfare *of* the people at length may be attained. And, notwithstanding all the drawbacks incidental to Government on the principles of Greek philosophy, it has its points. Experts are appointed to the various Departments : their reports invariably are well considered by the Government, the officials are well supported by the Government ; and the Government, on all questions, takes its electors into its complete confidence ; and always appears to have a large heart (if not always a large-enough purse) ever ready to further any schemes for the good of Natal.

**An opinion.**

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## The Transvaal

**T**HE Transvaal had an area of about 119,000 sq. miles, before the War ; but a large strip on its eastern boundary, amounting to 7,000 sq. miles, was transferred to Natal after the Peace of 1902. Physical features are simple but important. The surface is diversified by hills, valleys, and plains. The Drakensberg Mts. extend northward from Cape Colony for some hundred of miles, running parallel with the eastern boundary for a considerable distance, and constituting the only natural boundary of the Transvaal : the frontiers of the north, south, and west (especially the west), being more or less artificial or political. In these districts, it would be at first sight a waste of time to compare values, seeing that Nature has not distinguished their physical and geological features from those of the adjacent Colonies.

The Transvaal is divided into three parts, viz., the High, Middle, and Low Countries. The High Country includes the southern areas from the East to West. It has an altitude of 4,000 to 6,000 feet above sea-level. The Middle Country has an altitude of 3,000 to 4,000 feet. The Low Country embraces the northern and north-eastern regions. It dips down towards R. Limpopo on the north, and towards Portuguese Territory on the north-east. There are two hills on this irregular plateau which call for special mention, viz., Magatoland, and the Haenertsberg or Woodbush. They are both in the Zoutpansberg district and are

**Area.**

**Surface.**

**Three  
Divisions.**



## SOUTH AFRICA

notable for the heavier and more evenly distributed rainfall which they enjoy in comparison with other districts of the Transvaal.

### **Rivers.**

The Transvaal has few rivers. The Vaal and Limpopo mark the southern and northern boundaries. In the interior, the rivers are little better than stream-lets in winter. Notwithstanding their deep channels, they have but little water. The Mooi River, Groot Marico, Magalies, Aapias, Crocodile, and Oliphants, are the exceptions to this rule. An accurate idea of the Transvaal rivers may be formed from the following personal experience. In December, 1902, I crossed and re-crossed on foot R. Vaal (the chief river of the Transvaal) at various places between Vereeniging and Fourteen Streams. I was told, by very good authority, that it was not an uncommon thing for this river to be quite devoid of running water. It may be taken that all the Transvaal rivers look formidable enough for a day or two after heavy rain: but, when water is wanted for stock and irrigation in the winter-months, they are but sand and shingle with an isolated "Crocodile-pool" here and there.

### **Often dry.**

### **Heavy Rainfall.**

During my investigation of the Transvaal, after the Peace of 1902, I travelled 2,700 miles by cart, visiting almost every district. This tour fully convinced me that the terrible heaviness of the rainfall is the cause of the havoc which is being wrought on the surface of the country. Here, a gorge-like *sluit* had eaten-away a whole rich valley. There, one could see innumerable fissures converging on some *donga* where all the waters concentrated, and whence they carried the cream of the soil in thick mud towards the ocean. The country was apparently a level plain. Yet to make a "bee-line" across it was impossible; for a traveller would have to diverge in loops, to tack for ten and twenty miles round rain-cut crevasses and ravines, which invariably were as

### **Denudation of Soil.**

## THE TRANSVAAL

dry as a bone and as deep as (I think I ought to say) h—ll. At vast intervals, I encountered lonely Boers on their lonely farms. Their sole occupation seemed to be inert and vacuous inspection of the process of the devastation of their lands. Nature was carrying away from the beautiful valleys hundreds of tons of rich fertile soil, which would be the pride and envy and profit of other countries. And the Boer unconcernedly looks-on; and whimpers texts on the subject of Resignation. Enormous tracts of the Transvaal are being transformed into barren desert and rendered absolutely useless, owing to the apathy of the Boer farmer: but primarily owing to culpable neglect on the part of the Government. I give my reasons. New roads, or tracks, as they are formed, conduce to the destruction of the veld. These roads are from 20 to 500 yards wide, with innumerable *sluits* and *dongas*. They never receive scientific attention. As soon as traffic has rendered them inconvenient or impassable, travellers drive their carts and waggons along their verges. Thus a new strip of veld is taken in, widening the road to the enormous extent which I have designated. There being no fences to keep traffic within bounds, every man is free to take his own course. This is not only the case in the Transvaal. It is the rule throughout South Africa. Any one who has travelled by train through the Karoo, must have noted the criminal indifference with which the chief asset of the country is permitted to be wasted, not for a time, but for ever. And it is not only the Boer who is to be held responsible. Many progressive English farmers who have settled in the country are equally culpable. The neighbourhood of Queens-town, in the Eastern province of Cape Colony, is as bad in this respect as any part of the Transvaal. It is only where traffic and population are, that all these fine areas become completely denuded of vegetation.

Government  
culpability.

Irresponsible .  
Road-making

## SOUTH AFRICA

- Roads become water-courses and chasms.** Where the veld is left, and where no stock or traffic denudes and pulverizes the soil, the heavy rains do not cut the country into chasms ; and *sluits* and *dongas* are but seldom met-with. The matter calls for serious attention. "A stitch in time saves nine."
- A remedy.** The Government should stake out definite roads, plant trees, and direct torrents into channels. Only by such means as these are millions of tons of the best soil in the country to be saved from being washed-away into the ocean.
- The High Country.** The High Country of the Transvaal lying from East to West, (on which is the great gold-reef of the Witwatersrand,) is not only rich in the precious metal, but it is the fountain-head of all the water which flows north and south. It is the watershed of the Transvaal. The nature of the rock being suitable for natural reservoirs of enormous capacity, its subterranean caves have proved to be most valuable. The water supply of Johannesburg is derived from them.
- The Transvaal Watershed.**
- Notes on the original Voortrekkers.** The Voortrekkers, (who first came into the country,) crossed the Vaal and selected Klerksdorp and Potchefstroom as their head-quarters. They found the water sweet and plentiful, the soil extremely fertile, the pasturage nutritious. In the spirit of the true adventurer, they soon trekked all over the country. They were good judges of soil ; and the experience of many years enabled them to choose the most fertile areas. Today, they or their descendants, reap crops from alluvial soil without much labour or trouble : their stock grazes the most succulent pasture. What these people did not know about land was not worth knowing. The original Voortrekkers built for themselves in the Potchefstroom district, fine houses in the old Cape style, grand and spacious, with large verandahs or *stoeps* and high gables. That was in the old days. Such houses now are few and far between ; many
- Their importance.**

## THE TRANSVAAL

are in ruins ; more have disappeared completely. The descendants of the old Voertrekkers have been prevented from keeping their farms intact by the system of division ordained by the old Roman-Dutch law. Many of the original settlers had large families. Division of a farm among ten or twelve children involved the breaking up of the old homestead, and the erection of a number of small houses : but, when these divisions, in their turn, became sub-divided, and the sub-divisions themselves divided, it does not need a very vivid imagination to comprehend the miserable poverty of the original settlers' present representatives. In the neighbourhood of Potchefstroom, and especially towards Venterstroom, it was not uncommon to see ten, twelve, eighteen little hovels on one ordinary farm. Their inhabitants were the grand-children or great grand-children of some proud old Voertrekker, who had established himself in a fine house and accumulated large flocks and droves. His offspring are wretchedly poor and thriftless. They cultivate just enough land for their most urgent wants ; and they idly look on the broad acres which, with a little energy on their part, could be made to lift them out of the slough of despondent poverty in which they are. Their dwellings are little better than Kaffir huts, consisting of a square room, with walls of unburnt brick and an iron roof, in which a whole family of seven or eight persons of both sexes live huddled-up together in promiscuous insanity. As far as I could see, these hovels only differ from the Kaffir huts in that the latter are round and thatched with reeds and have no windows, while the former are square and have one or two holes for the admission of light.

The High Veld of the Transvaal is notable for its dry and healthy and comparatively bracing climate. At night-time the depression of the temperature is very great ; and precaution becomes a duty.

**Their  
degenerate  
descendants.**

**Farms  
divided.**

**Hovels.**

**Poverty.**

**Comparison  
with  
Kaffirs.**

**High Veld  
healthy.**

## SOUTH AFRICA

Dryness of air implies aridity of soil. This is characteristic of many parts of the Transvaal. The higher averages of rainfall occur in the vicinity of the Drakensberg. Westward of this barrier, climate and soil become drier.

**Middle Veld  
less healthy.**

The Middle Veld of the Transvaal, with its lower altitude, is not so healthy. Malarial fever is common, but not virulent. Horses and sheep do fairly well for a portion of the year : but, if they are not removed to the High Veld during the rainy season, they succumb to fever. Last year (1903) was an extremely bad year for horse-sickness.

**Low Veld  
unhealthy.**

The Low Veld of the Transvaal is unhealthy, except during the winter months. It is unsuitable for Europeans who have not undergone a long process of acclimatization. It also is fatal to horses and sheep, except during six months of the year.

**Retrograde  
Transvaal  
farmers.**

Except in a few isolated instances, the farmers of the Transvaal are far behind their neighbours of the Orange River Colony. Little or no attention has been paid to stock-breeding. Quantity, and not quality, seems to have been their objective. Diseases of animals are very prevalent. Scab is never out of the country. Little or no attempt was made by the late Boer Government to deal effectually with this pest ; and the farmers have not co-operated willingly for its eradication. This, and other diseases, have played havoc with stock : but the peculiar habit of mind, which the Boers use in regard to the operations of Providence, has kept them from doing more than snivelling and snuffling. "God helps those who help themselves" is by no means an acceptable saying to the fatalistic Boer.

**Animal  
disease.**

**Retregres-  
sion due to  
Religion.**

**An opinion.**

**Pasturage  
vs.  
Agriculture.**

The Transvaal, like the rest of South Africa, is more suitable for pasturage than for agriculture. Cereal-farming has had a sort of Protection up to the present ; and yet the Boer has not been able to derive

## THE TRANSVAAL

any signal advantage from this branch of husbandry. Protection, and high railway-rates from the coast, have not induced him to cultivate the rolling plains. Newcomers are prone to think that the country has been, and is, wasted for want of expenditure of energy and capital. In my travels, I noted every little attempt which has been made in the past; and I have come to the conclusion that the combination of antagonistic natural forces has proved too strong for the agricultural experimenter. I do not mean to imply that cereal-farming is altogether impossible in the Transvaal: but I do not recommend it as a source of profit. The best districts for its practice are Pretoria, Rustenburg, Marico, Lydenburg, and Potchefstroom, but wheat and oats, sown in dry land in summer, often are ruined by rust, smut, hailstones, or locusts. It is true that wheat and oats can be, and are, raised very successfully in winter on artificially irrigated land; and some of the crops, which I saw, were very good and yielded a fair average: but the cost of production completely barred them from competition with foreign-grown wheat, except where the railway-rates and protective-tariffs intervened. These last, being accidental in their nature, ought not to be set against the accentedly unsatisfactory essentials which menace the pursuit of agriculture in South Africa.

Potchefstroom is considered to be one of the most favoured cereal-districts of the Transvaal. After a special study of this district, I came to the conclusion that land without artificial irrigation is of little or no use. I found the present price of irrigated land to be unreasonably high. For those, however, who had acquired such land at reasonable prices before the War, wheat-growing for the local market might be profitable: but no sane man ought to think of attempting agriculture, when encumbered with the

Nature  
against  
Agriculture.

Cereal  
districts.

Irrigation in-  
dispensable.

Unwarrant-  
able price of  
irrigated  
land.

## SOUTH AFRICA

**Archdeacon  
Roberts'  
experiences.**

obligation of paying interest, (in the shape of rent) on the present value of these irrigated farms. Several Englishmen had been farming here before the War. Archdeacon Roberts, an old inhabitant of Potchefstroom, described to me the case of a very energetic and scientific English farmer, who took a farm ; and, with modern implements, succeeded in ploughing and cultivating a large tract of land. The first year, he sowed mealies. They made a good start, and promised well. Then, one day about the time of harvest, a hailstorm threshed every grain out of the cobs ; and the crop was totally ruined. Not to be beaten, he ploughed the land again ; and sowed wheat. Like the mealies, this crop grew luxuriantly ; but, as the season advanced, there were no signs of grain forming in the ear. None did form : it was a crop of straw ! Archdeacon Roberts was much interested in these experiments. He visited and examined most of the farms in the district : but, after he had seen all that was to be seen in the vicinity of Potchefstroom, he became convinced that it was impossible to make agriculture successful, or even remunerative. Many continue to farm, as a hobby ; but they depend on other sources of income for their livelihood. Interrogated whether he knew of a single successful agriculturist in the district, (i.e. a man who made his living simply and solely by growing cereals,) the Archdeacon responded in the negative. He knew men who, by combining stock and cereals with transport-riding, were making a fair living ; and that was all. There was nothing he would like better than to see more English settlers in the district : but, as agriculturists, they would have no chance, for (though the crops occasionally might escape many pests) the early and late frosts often would ruin them.

**A crop of  
straw.**

**His opinion.**

**No successful  
Agriculturist.**

**Mealies and  
Kaffir-corn.**

Mealies and Kaffir-corn are grown extensively throughout the Transvaal without irrigation. Occa-

## THE TRANSVAAL

sionally, a crop is lost through locusts or excessive drought : but, as a rule, farmers are not disheartened by the loss of such crops, the outlay upon them being insignificant. Live-stock, rather than cereals, is the mainstay of the Transvaal farmer. In Johannesburg and other towns, the opinion is held that mealies should be a most productive and profitable crop for the farmer. I myself held this opinion before I made an exhaustive investigation of the subject. The total consumption of mealies on the Rand before the War was 800,000 bags a year. Now it does not take a very large area, or very many farmers, to produce 800,000 bags of mealies ; and besides, the natives grow a very large proportion of the mealie-crop, and would grow much more if they had better facilities for marketing it. I interrogated every farmer whom I met as to why he did not grow mealies. They invariably responded that, if they did, the price would be too low — they had tried it : — when they were successful, other farmers were also successful ; and an abundant crop all over the district forced-down the price of mealies to as low as 3s. 6d. a bag. This statement was borne-out by farmers not only in the Transvaal, but also in the Orange River Colony and Natal. During the War, a Boer brought in 30 bags of mealies for sale. The Army Service officer paid 20s. a bag for them ; and said to the old farmer, “ Have you ever received “ so much for your mealies before, Johannes ? No ? “ Well then, I suppose that, now you see what a lot of “ money 30 bags brings you, you will go home and “ double the area which you cultivated this year ? ” And Johannes answered, “ Na, Sir : but only half ! “ Everybody will grow more mealies next year ; and “ there will be no price or market for them ! ”

The Transvaal is essentially a stock-country. The Boer knows it. He may nourish a sentimental desire to grow his own loaf ; but he by no means is

**Stock, the  
mainstay.**

**Mealies  
unprofitable.**

**An anecdote.**

**Transvaal  
for Stock.**



## SOUTH AFRICA

inclined to grow other people's loaves. He will sell cattle, sheep, horses : he knows that there is profit to be made without much trouble on such transactions ; but cereals — he has no objection to their importation. The quality and quantity of the grass in the Transvaal, however, always must act as a rigid check upon the pastoral population. That will remain small.

**Best Grazing Area.**

The South-eastern side of the colony is undoubtedly the best grazing area. I saw some cattle in this district which were good. But, here, as in most of the other districts, pastoral farming is merely mediocre as a rule, the causes being, insufficient attention to the constitution of the animals, over-stocking, and no provision for winter feeding. At a reasonable

**Conditions.**

purchase-price, a farm of 3,000–5,000 morgen could be made to pay the scientific farmer handsomely. The grass is good : the rainfall is heavier and more evenly distributed than elsewhere : there are fewer of the poisonous plants or tulips than in any other districts ; and sheep, cattle, and horses, are good and fairly free from disease. With a little care in the selection of good-breeding stock, scientific methods, and sufficient capital, a man would be well-remunerated.

**An Opinion.**

**South-West District.**

The South-western district, with the exception of Schoonspruit and the alluvial valley of R. Mooi, is a badly watered area. The soil in most places is shallow and poor in quality. Water is scarce : it is generally found within 15–50 feet of the surface : but it is seldom of good quality. Dams are small and untrustworthy, many of them being silted-up and useless : consequently, very little agriculture is attempted except under irrigation. The farms are

**Lack of water.**

**Pasturage.**

**Animal diseases.**

generally very large. Pasturage in a small way is the only possible industry at present. Sheep suffer much from heart-water and blue-tongue : the latter disease is considered by some farmers to be identical with "horse-sickness." Poisonous weeds and tulips

## THE TRANSVAAL

are prolific, and afflict sheep and cattle more in this district than in any other part of the Transvaal. Cattle also suffer from gall-sickness, and stiff-sickness (stiff-ziekte), the latter generally being caused by want of phosphates.

Before the War, farms could be bought for 2s. – 5s. an acre. Owing to the wild speculation which followed the Peace of 1902 the same farms are priced at 10s. – 20s. an acre.

The Middle Veld (Pretoria, Rustenburg and Marico) is rich in soil and better watered than most of the other districts. Good crops of oat-hay and wheat are grown almost anywhere under irrigation. Tobacco is a favourite crop in this neighbourhood, Rustenburg being noted for the best quality. The soil is exceedingly fertile and rich in nitrates: but it is deficient in lime and phosphates. Horses and sheep do not thrive here except during the winter months. Owing to the possibility of minerals being found on farms in this district, their close proximity to markets, and the recent unnatural demand for them, prices have gone up by leaps and bounds. Values, which were quoted in hundreds of pounds before the War, now stand at as many thousands; but, when the present epidemic of speculation has spent its force, there will be no great difficulty in getting farms here at reasonable prices.

There are several good farms north of Pretoria until the Springbok Vlake are reached. These enormous flats are covered with straggly grass, scrub, bush, and stunted trees. The soil is peaty; and absorbs rain like a sponge. Cultivation becomes impossible in wet weather: for the soil coagulates in such a manner that the cattle and the plough cannot work it. I tested the soil in various ways. It is extremely rich in organic and inorganic matter: but, owing to its extraordinary power of absorbing heat

**Prices of  
Farms.**

**The Agri-  
cultural  
District.**

**Tobacco.**

**Unsuitable  
for Stock.**

**Reasons for  
high prices  
of farms.**

**Springbok  
Vlakte.**

**Soil rich;  
but absorb-  
ent and  
useless.**

## SOUTH AFRICA

	as well as moisture, it dries-up in a few hours. In consequence, after a spell of fine weather, the whole surface cracks to a great depth : the soil gets hard ; and vegetation withers. The Boer has left this rich soil untouched. Such is its nature, that no practical agriculturist will attempt to cultivate it. Not only is it unsuited for dry-land cultivation, but great difficulty would be experienced in tilling it under a system of irrigation. Further northward, beyond the Vlake, there are many rich patches of land : but malaria is prevalent, and sometimes very virulent.
<b>Malaria.</b>	
<b>Natives' land.</b>	The North-western portion of the Transvaal is not inhabited by white men. There are some good farms on the Pilandsberg ; but northward of that I only met one white farmer. The surface is chiefly granite, covered with shrubs and stunted trees ; and diversified by large arid areas with an occasional oasis of swamp. The soil of the valleys is exceedingly fertile. I noted the remains of water-furrows and the ruins of old houses along some of the river banks. The natives informed me that, at one time, the Boers had established themselves there : but that they had died ; and none had come after them.
<b>Fertile soil.</b>	
<b>Relics of Boer occupation.</b>	
<b>Fever.</b>	This district is much infected with fever : many natives had succumbed just before my visit. Some Boer farmers trek with their cattle to those low-lying districts in the winter. They do not build houses ; but live in their covered waggons ; shooting game and herding their cattle. I may mention that the whole of this very undesirable tract of country has been divided into farms, named and numbered, which look quite attractive on the map with their imaginary lines for rivers. Intending settlers would do well to study <i>Martin Chuzzlewit</i> ; and to leave these malarious and arid lots entirely to the speculator.
<b>Winter trekkers.</b>	
<b>A denunciation and a warning.</b>	
<b>The healthy Zoutpansberg.</b>	The North-eastern Transvaal includes the Zoutpansberg district. Owing to its altitude the Zout-

## THE TRANSVAAL

pans Hill is fairly healthy. It is well-watered and well-wooded, and some of the trees possess commercial value—an unusual thing in the Transvaal. On this hill are some very rich valleys intersected by streams of flowing water. Most of this desirable land is in the possession of the Government; it is the best land which the Transvaal Government has to offer to settlers. The climate is unlike that of most parts of the country. The rainfall is very heavy; and, sometimes for days together, there occurs the phenomenon which erroneously is known as a “Scots Mist”: (the real “Scots Mist” being what an Englishman would call a steady downpour of cats and dogs.) However, the Zoutpansberg mist is highly beneficial to vegetation, as it saturates everything. I do not think that there is much (if any) risk of drought in this district: streams are plentiful, and a permanent system of irrigation would be simple and efficient. Until four or five years ago, the whole district was a native reserve. The Boers, having been unable to dislodge the Kaffirs, agreed at length to define and acknowledge certain boundaries: but, five years ago, the natives became disobedient and troublesome; and the Boers, returning to the fray, this time did dislodge them. Then followed the Great Boer War: after which, seeing that the Zoutpansberg had not been apportioned by its previous conquerors, the new Transvaal Government entered into possession of nearly the whole of it.

The Haenertsberg or Woodbush district is more favoured by soil and climate than many others. Between it and the Zoutpansberg lies the Spelonken. A number of English people live here. Much of the land is under tillage: but the farmers hardly can be termed bonafide farmers: for they keep stores, and carry-on a considerable native trade, buying, or rather bartering, with the Kaffirs, blankets, etc., for mealies.

**Weed and water.**

**Fertile soil.**

**Best land owned by Government.**

**Good rainfall.**

**Irrigation easy.**

**Another favoured district.**

**English residents.**

**Store-keepers.**

## SOUTH AFRICA

These store-keepers appeared to me to live on the cream of the country. They own many farms, cattle, sheep, horses, which they often obtained in settlement of outstanding debts. They all were in a flourishing condition. It would be improper, however, to apply the same description to their customers.

**Most suitable  
for English  
settlers.**

With better facilities for transport, such as a railway from Pietersburg to the Spelonken, a rich district could be opened-up, the one district in the Transvaal where English settlers might find agriculture to be possible and profitable. It must not be forgotten, though, that (in many of the low-lying valleys) fever

**Fever.**

often is very malignant and deadly: but on the hills with proper precaution, it need not be feared. Most

**Diversities  
of Soil.**

of this district is divided into farms; and it would be difficult to find another district in the Transvaal where the soil is so diversified. From an agricultural and pastoral point of view, some of the farms are not worth the price of the paper on which their names are written. Others are of excellent quality, some being well-watered and well-wooded and rich in soil and vegetation. But the prices of all the farms, good, bad, and indifferent, are the same. The speculator has hung them all "on the nail." Even the prices of the good farms are much too high; but any of them can be rented (subject to 3 or 6 months' notice (at a nominal rent, the usual rent asked being about  $\frac{1}{4}\%$  of the present market value.

**Prices as yet  
unreason-  
able.**

**Vegetable  
Gardening.**

There is a flourishing industry in vegetable-gardening round Pretoria and Johannesburg: but the margin of profit accruing to the gardeners is very small. If it were not that the Italians and Coolies (many of whom use scientific methods) exhibit undeniable skill, it would be quite impossible to raise vegetables at the prices current in these two towns. This industry is

**In the hands  
of  
foreigners.**

almost entirely in the hands of foreigners; and there is little or no prospect, even with double the present

## THE TRANSVAAL

demand, of an opening for English settlers. One Englishman, who for ten years had been engaged in growing vegetables for the Johannesburg market, told me that he had decided to give-up the business and try something else : he had more money when he started than at the moment when he spoke to me. This caused me to visit most of the vegetable-gardens near Johannesburg and Pretoria ; and what I saw there convinced me that our English settlers cannot hope to compete with the existent gardeners, who have studied vegetable-growing all their lives, and the cost of whose living does not amount to one-half of that of the ordinary English settler.

No room for  
English.

I am not sufficiently conversant with tropical and subtropical produce to express an opinion as to the possibility of growing sugar, coffee, cocoa, at a profit. I saw some small coffee plantations : but, at the date of my visit, all the trees were dying from one cause or another ; and no one seemed able to explain this extraordinary state of things. The trees were covered with berries : but the wood and leaves had turned quite black, and were in the last stage of decay.

Tropical  
produce.

The best authority in the Transvaal on subtropical produce is Mr. Altenroxel, a very extensive agriculturist on the Thabina and Westfalia lands on the banks of the Groot Letaba River in the North-Eastern Transvaal. In a report on the prospects of the country, published in Mr. Bleloch's *New South Africa*, he says that the south-east of the tropical portion of the Transvaal is very well adapted for the culture of all tropical and subtropical produce, such as sugar-cane, coffee, tea, tobacco, cocoa, with all kinds of fruit. His own coffee-trees were doing well. The first crop in the second year of planting was averaging 3½lbs. a tree ; whereas, in Java, coffee-trees only bear in their fourth and fifth year. The district, of which Mr. Altenroxel speaks, is part of the low country. It is considered

Mr. Alten-  
roxel's  
experience  
and opinion.

## SOUTH AFRICA

- Quite suitable for Europeans.** unhealthy : but he and his staff affirm that they have kept remarkably well and free from fever ; and that they consider it quite suitable for Europeans.
- New Government.** A few words are due to the new Government of the Transvaal. New departments have been created, and good salaries are paid : from which it is only reasonable to expect that valuable results will be attained. The Transvaal has been exceptionally fortunate in securing the services of able energetic men of affairs. Provided that sufficient time and scope be granted to him, Sir Arthur Lawley may be trusted to organize and conduct the government of the country in a wise and dignified manner. At present it is premature to criticize an administration which has been in existence for, and has had many serious difficulties to contend-with in, so short a period of time. Nevertheless, it may be said that already there have been some misfits, as Sir Arthur Lawley himself would acknowledge. Some of these were energetic faddists, while others seemed to have been pitchforked accidentally into a sphere too remote to enable them to contemplate matters merely sublunary. Such men as these could be spared quite conveniently. South Africa is no place for *petits maîtres*. Their presence was an embarrassment to the progress and future welfare of the country. Their absence became them as the most laudable action of their lives. When the drag is off the wheel, the chariot naturally moves more easily.
- Agricultural Department.** My attention was directed more to the agricultural interests of the Government than to any other. I certainly could not say that agriculture was well looked-after : but still an attempt was made to render it successful. It was not energy and hard work which were lacking, but practical experience ; and, for this cause, the expected progress is still delayed. There was much industry of a certain kind ; there also was
- Industry and Idleness.**

## THE TRANSVAAL

idleness. There was hard labour without skill or knowledge : there were experimental attempts which contemned established practices and ignored rudimentary principles of farming. Still, it is to be hoped that the many of the fond dreams of the agricultural experts of the Transvaal will be realized some day.

**Judgment  
deferred.**





## Orange River Colony

**T**HE Orange River Colony has an area of about 48,000 square miles. The whole of it is situate on the great inland plateau, at an altitude of 3,000-4,000 feet above sea-level.

Its uniformly high elevation has most important physical results. It gives a mild temperate healthy climate, enabling Europeans to live in any part of the Colony where the soil is suitable for agriculture or pasturage. Its physical and geological conformation also seems to have influenced the thoughts, actions, and industrial pursuits of the inhabitants, tincturing and affecting their conditions, their religious sentiment, their love of liberty, and their ideal of social government. I speak here of those of the King's subjects who formerly were Orange-Free-Staters. The members of this agricultural and pastoral community are, as a class, more straightforward, manly, progressive, and prosperous, than the other South African Boers. There is more stability about them. To use a scriptural analogy, they are the Issachars, and not the Reubens of Boerdom. Before the War they gave evidence of wealth and contentment unequalled in any other rural portion of South Africa. They had an ideal government. Liberal and just laws were administered in an impartial manner. An unaffected welcome awaited every white man, no matter whence he came. The English had nothing to complain of under the *Vierkleur*.

**Area, situa-  
tion, alti-  
tude.**

**Climate.**

**Effect of  
natural con-  
formation  
on the  
people.**

**Character  
of inhabit-  
ants.**

## SOUTH AFRICA

The aboriginal was ruled in a just and fair manner, and held in his proper place—subjection. The country was prosperous, yielding enough and to spare for man and beast. The Free-Staters were eager for education, English being their favourite language after the Taal. The beneficent effects of civilization were spreading throughout the land. Then came the betrayal. Simplicity, duped by venal political schemers, wrought its own downfall.

**Incidental  
panegyric.**

It seems almost a tragedy to have wiped out such a form of Government. I well remember entering a little town in the eastern district of the Orange River Colony. An old English settler in the country met us. He certainly was pleased to see the English troops victorious: but his joy was mingled with regret. Tears came into his eyes when we hauled down the old Free State flag. "Bar one," he said, "it was the best little flag the world ever has seen!"

**Issachar.**

Issachar "saw that rest was good, and the land that it was pleasant; and bowed his shoulder to bear, and became a servant unto tribute." There are signs of returning prosperity and contentment in the Orange River Colony. The quondam Free-State Boers are practical sensible men. They have admitted their error. They may mourn, for some years yet, over the downfall of their own old style of life and government: but, with their traditional respect for law and order, there will return that easy familiar loyalty to those in authority over them; and the change, which they know is for the better, will not be half so bitter as persons otherwise interested would like to imagine.

**A land of  
farms.**

The whole of the Orange River Colony is divided into farms. These vary in extent from 200 to 20,000 acres. They are held subject to a quit-rent of 2s. a one-hundred morgens. One morgen equals two-and-a-ninth of an acre.

**No bush.**

There is no open or back country, as in the other colonies of South Africa.

## ORANGE RIVER COLONY

The Orange River Colony exhibits varieties of vegetation, soil, and rainfall. These materially affect the conditions of farming. Some farms are purely pastoral : others are more suitable for cereals ; and others again are suitable for mixed farming. Therefore, the choice between agriculture, pasturage, and the two in combination, is not offered. The character of the soil and rainfall on each farm determine the kind of farming for which it is fitted.

**Vegetation,  
soil, rainfall.**

The farming class also varies, from the poor Bijwoner, who ekes out an existence in the poorer districts on the goodwill of his more favoured neighbour, to the wealthy husbandman who lives in a substantial house, with good farm buildings and garden, fine and numerous flocks and droves or prolific acres, good horses, and every luxury which money can purchase.

**The farming  
class.**

Most farmers have erected dams, many at very great outlay. It is not unusual to find dams, which have cost thousands of pounds, almost or entirely useless. The porous nature of the ground, scanty rainfall, erroneous construction, neglect of consideration of the important and inevitable phenomenon of natural evaporation, often empty the dams at the very time when water is required for irrigation. One farmer, who gave evidence before Mr. Arnold Forster's Commission in South Africa, stated that he had 13 dams on his farm, 4 of which would not hold water. As a rule the Boer exercises sound judgment in selecting the site for a dam. It is the newcomer who generally errs in this particular. Faulty construction is found in the dams of both Boers and newcomers ; and invariably is due to a predilection for spoiling the ship for a ha'porth of tar. Sound and satisfactory dams can be, and are, constructed : but not without considerable outlay.

**Dams.**

**Many useless  
ones.**

The Eastern District, which borders on Basutoland, is extremely fertile. It also is very hilly. The valleys have rich alluvial deposits of great fertility and depth.

**EASTERN  
DISTRICT  
its fertility.**

## SOUTH AFRICA

The hills are covered with a mixture of sweet grass and sour, the latter predominating. Stock readily consumes most of this grass in winter and spring, when the valleys are excessively cold. Were it not for the hills, and their genial warmth in wet and cold weather elsewhere, stock would suffer considerably more than it does.

**Soil.**

The soil is of a red-sandy nature : but it is much lighter in colour than the red-sandy soil of Cape Colony. It is also of a more loamy consistency ; and, on this account, has a greater capability for retaining moisture. Many of the rocks contain large quantities of phosphate of lime, unknown in any other parts of South Africa.

**Automatic manuring.**

The land thus becomes automatically manured, by the crumbling of these rocks, by the solubility of the phosphates, and by the action of the weather, when the heavy rains carry the phosphates in solution over all the surface. This is an important feature in the soil-history of this favoured district. It, and the fact that

**Favourable rainfall.**

there is a more regular rainfall and a more humid atmosphere, (owing to the close proximity of the mountains of Basutoland) have earned for this part the name of

**Four afflictions.**

“ The Granary of South Africa.” But its drawbacks must not be unconsidered. The chief are droughts, hail-storms, and incursions of locusts. The rainy season also occurs in harvest time ; and these four afflictions often cause great anxiety, trouble, and loss, to farmers.

**Successive cropping.**

Many of the rich alluvial plots are known to have produced from ten to fifteen crops in rotation, without artificial manure, and often with a very indifferent system of cultivation. On the other hand, many thousands of acres in this district have been entirely exhausted by successive cropping ; and, at the present moment, they lie abandoned by the cultivator.

**Exhausted lands.**

**Comparison with England.**

This is the only part of South Africa where the conditions of farming are not unlike those of England.

## ORANGE RIVER COLONY

Hence it is the only district where a knowledge of English agricultural methods would be useful, and their practice profitable. All the farms, however, which might be suitable for English settlers, are held firmly; and are not to be purchased at "a living price." Therefore the prospects of English settlers here are not by any means brilliant: except in cases where farms were acquired for the low prices which ruled before the War.

**Settlers' prospects.**

Mr. Hull, a most practical and hard-working farmer, who now farms the late Cecil Rhodes' farm in the Matoppos, told me that (before the War) he and his brother (both Colonials with a life-long experience of farming in Cape Colony) bought a farm in the Eastern portion of this district for 10s. a morgen. During some years, they worked on it like slaves. One year, locusts ate their crops: another year, drought scorched them: a third year, hailstorms threshed and scattered them: and so on, and so on. Disheartened at length after years of unremunerative and exhausting toil, the two determined to sell. They sold to a syndicate for the purpose of an English settlement. They sold for £2 10s. 0d. a morgen, i.e.—£2 a morgen more than they themselves had paid. These men, aided by the experience of two life-times, failed to make a living out of this farm which had cost them only 10s. a morgen. It will be interesting to observe whether men, who have no colonial experience, will make it pay at £2 10s. 0d. a morgen.

**Experience of Mr. Hull.**

The Southern portion of the Orange River Colony is a continuation of the Northern portion of Cape Colony. It is divided by the Orange River; and is of the Karoo-bush character, with a sprinkling of grass here and there, especially in its Northern portions. This district is much overrun by weeds which are inimical to stock. Cattle and sheep formerly used to thrive: but over-stocking and bad management have

**SOUTHERN DISTRICT**

**Bush.**

**Weeds.**

## SOUTH AFRICA

<b>Scarcity of water.</b>	deteriorated the herbage, so that the Afrikaner sheep and goats now form the bulk of the farmer's stock. Water is scarce. No agriculture, except of mealies and Kaffir corn, can be carried on without artificial irrigation.
<b>NORTH-EASTERN DISTRICT.</b>	<p>The North-eastern portion of the Orange River Colony is devoted more or less to stock. Cattle and sheep (especially the merino-sheep) do remarkably well. Horse-breeding is carried on extensively. I noted some good studs east of Winberg, and many of the farmers seemed to take very keen interest in this branch of farming. They import sires of good English blood. I also noted several farmers who took great interest in merino-sheep. Most of the farmers in this District are in the habit of trekking, with their live stock, to the low veld of Natal in winter. A few good shelters for horses have been erected on some of the farms : but little or no protection of the kind exists for sheep and cattle. Trekking is the only way of saving the stock from winter starvation. There is much to be said for and against this practice. The farmers of the Orange River Colony are men of intelligence and means. Before dogmatically condemning their system, it will be advisable to determine whether it is based merely on the traditional custom of the country, or on some valid (but not very obvious) reason. Meanwhile, until better means of shelter and more adequate provision of winter fodder be forthcoming it will be safer to look upon winter-trekking simply as a pis-aller.</p>
<b>Stock.</b>	
<b>Horse-breeding.</b>	
<b>Merino-sheep.</b>	
<b>Winter-trekking vs. shelters.</b>	
<b>WESTERN DISTRICT.</b>	<p>The Western portion is of a more sandy and arid nature than any of the other districts. It exhibits a large area chiefly covered with hard and stony soil. There are few sources of water beyond the numerous brackish pans. It is a huge plain, not in the sense of a level expanse (which commonly is associated with ideas of verdure and fertility), but it varies from an occasional and limited oasis to a desert of shingle and loose shift-</p>
<b>Sandy desert.</b>	
<b>Lack of water.</b>	
<b>Occasional oasis.</b>	

## ORANGE RIVER COLONY

ing sands. Cattle thrive on the river-banks ; and there is good winter-grass on the western boundary. Very little of the land is under irrigation. Dry-land cultivation is carried on here and there ; and fairly good crops of mealies are sometimes obtained. There is also good grazing for sheep. But the soil, being naturally very loose, is frequently washed away by rains. *Sluits* and *dongas* are very numerous. Dams soon become filled with silt ; and, at the present moment, some hundreds stand filled - up and rendered useless. There is a smaller percentage of the Bijwoner class here than in any other part of the country : the reason being that the farms are small, and what wealth there is is distributed more evenly.

The conditions of farming in this district offer but little encouragement to the inhabitants, and none whatever to the intending settler.

**Silting of  
dams.**

**Adverse  
opinion.**





## Basutoland

**T**HIS country has been called "The Switzerland of South Africa." It is bounded by Natal, Orange River Colony, and Griqualand East. Its area, of about 10,000 square miles, is intersected by ranges of mountains whose altitudes vary from 4,000 to 11,000 feet. Between these, are rich alluvial valleys, which have an abundance of flowing water all the year round. Rivulets abound, and numerous waterfalls: one of which (called Malefsunyane) plunges down a perpendicular precipice of 400 feet. The landscape might be described as beautiful were it not for its barrenness. Whether the wood has been destroyed, or not, I do not know, but there is scarcely a tree to be seen, although (except on cultivated land) the surface is covered with scrubby bush.

The natives of Basutoland are highly intelligent. Most of them live by the cultivation of the land. This colony is noted for the excellent quality of its wheat, of which a large quantity is exported annually. Basutoland is also a good stock-country: but its chief claim to reputation lies in its breed of ponies, which are second to none in South Africa. They are hardy and well-bred; and, although they are small, they can carry weight equal to the capacity of a horse much bigger than themselves. They climb or descend hills, with a rider on their backs, in a most marvellous manner. During the War, it was no uncommon thing to see men mounted on Basuto ponies carrying, besides

**"The Switzerland of South Africa."**

**Area.**

**Water.**

**Barrenness.**

**Intelligent Natives.**

**Fine ponies.**

## SOUTH AFRICA

the human weight of 12-13 stone, a heavy military saddle, rifle, rations and accoutrements. These little Basuto ponies are the best-all-round animals for the country.

**Black  
labour.**

**Government.**

Basutoland supplies a large quantity of Black Labour to the Kimberley and Rand Mines. The country is administered by the Imperial Government and is divided on the communal principles. No land can be bought or sold: ownership being vested in the inhabitants, who are governed by their chiefs under a Resident Commissioner.

## Bechuanaland

**T**HE Crown Colony of Bechuanaland was annexed to Cape Colony in 1895. It has an area of 51,538 square miles, divided into five districts—Mafeking, Vryburg, Taungs, Kuruman, and Gordonia. Its altitude varies from 3,000 to 4,000 feet. Vryburg has an altitude of 3,890 feet and Mafeking of 4,190 feet. The distance by railway from Mafeking to Capetown is 870 miles.

**Area and  
altitude.**

This territory is bounded on the north by the Ramalhabama and Molopo Rivers: on the east by the Transvaal and Orange River Colony; on the west by the Kalahari desert; and, on the south, it is a continuation of the northern plains of Cape Colony.

**Boundaries.**

The average rainfall is 18" to 22" but some years are exceptionally dry while others give a rainfall far in excess of this average. Mafeking and Vryburg had a rainfall averaging 30" annually for five years.

**Rainfall.**

Most of the running streams are in the Native Reserves: but there are other streams which exhibit water at various points. R. Setlagoli, which is a "sand-river," has a large supply of water below the surface-sand. Mr. Gethin, the manager of the Southern Land Company, told me that he had seen droves of cattle watered in the driest season of the year by digging holes in the sand of the river-bed. In other parts of this river, where a stratum of rock underlies the sand, no water has been found. This also is the case with

**"Sand-  
rivers."**

**Subterra-  
nean water.**

## SOUTH AFRICA

R. Mashowing, between the farm Ganap and the Madebing Native Reserve : but, from the east beacon of Madebing Reserve of this river toward the western river beacon adjoining the farm Tweed, water flows freely on the surface. Bechuanaland possesses many of these "sand-rivers," i.e. regularly eroded river channels chiefly filled with sand instead of water. It was suggested to me that the old beds of these rivers were buried, in the course of centuries, beneath sand and other pulverised debris blown by heavy storms from the desert ; and that the streams themselves actually exist still. In this connection, an analogous phenomenon occurs to me. In England, after a heavy fall of snow, many of our streams become completely covered in, exhibiting no visible sign of flowing water or river-banks : yet, beneath the snow, the water flows. Hence I am inclined to believe in this theory of flowing water beneath the "sand-rivers" of Bechuanaland. One thing is certain. In those parts of the river-beds, where neither porous soil nor tracts of sand exist, the water does flow on the surface : but, immediately it comes in contact with porous matter, it disappears, only to emerge again at some distant point. If research and experiment in boring these "sand-rivers" for water should prove successful — and my own belief is in the probability of such success — this vast territory, which only needs water to make it a most desirable stock-country, should witness a great influx of population, and become a very different place to what it is today. I do not think that there is room for any doubt on this point. The few experiments, which so far have been made, all go to prove its validity. Both here and in the Kalahari Desert, such subterranean streams are known to exist ; and they are streams, i.e. flowing water, not to be confounded with the underground reservoirs which sometimes are found in rocky soil. It would be interesting and profitable, for

## BECHUANALAND

example, to trace (by boring) the real source of the Kuruman River, which breaks out from a subterranean cave at the back of the Magistrate's house at Kuruman in a strong permanent stream,—to work back from that cave along the catchment area, boring the sand for the upper stream or streams which, by the laws of Nature, must exist for the filling of the reservoir whence gushes the R. Kuruman as at present known. It would be quite possible to irrigate the large tract of land which lies below the present head-water of this river : land which belongs to the London Missionary Society, and is valuable on account of these possibilities of placing it under irrigation. And, if this may be said of the lower reaches, it also must be said of the upper reaches where certainly an equal volume of water awaits discovery. Before leaving this subject I will cite the opinion of Professor Bryce, as follows :—

**Kuruman  
River.**

**Boring  
necessary.**

" I travelled 400 miles through the country without once crossing running water ; though here and there, in traversing the dry river-bed of a brook, one was told that there was water underneath, deep in the sand. Notwithstanding this superficial aridity, Eastern Bechuanaland is deemed one of the richest ranching tracts in South Africa, for the grass is sweet, and water usually can be obtained by digging, though it is often brackish."

**Opinion of  
Professor  
Bryce.**

Many parts of Bechuanaland have good grazing grounds. The sand-veld, which is thickly covered with Kameel thorn-tree, has very rich deep soil with good warm pasturage. This area is healthy and very suitable for cattle. The High Veld is also very good for small stock, i.e. sheep and goats, for which the Gordonia district is noted. And there is some excellent grazing in and about the Genesa Native Reserve. Beyond this, the Southern Land Company owns about 50 farms, all of which have been pegged and surveyed. R. Mashowing is the boundary of many of these farms ; and large areas in this block are thickly wooded.

**Grazing.**

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**Farms.** Farms throughout the country vary in size from 6,000 to 16,000 acres. They belong chiefly to the Cape Government and various Land Companies. It is not difficult to get farms at very low prices. The Government Commissioner advertised a farm of about 7,500 acres on the R. Mashowing at £275. At the same time there were 35 other farms advertised for sale ; they averaged 6,000 acres, and were offered at an

**low prices.** average price of £200. Many of these farms are suitable for grazing, the only drawback being the scarcity of water : but, where water is found in sufficient quantity to water stock, (and I have indicated the splendid possibility of its being found,) it is wonderful how cattle and sheep will thrive.

**Cattle.** The Afrikaner cattle, judiciously crossed with a Friesland bull, produce a very good type of cattle ; and the progeny may be depended-on as hardy and good for agers. One of the best authorities in Bechuanaland told me that Shorthorns and Devons are not suitable for the country. They are too finely bred ; and have no natural instinct for foraging for themselves : nor are they hardy enough for the climate : nor would it pay to feed them artificially under existent circumstances.

In 1896, Rinderpest slew a very large number of cattle, the property of whites as well as natives ; and it is astonishing to see how the droves have increased since then. The native cattle are inferior ; because no scientific method of breeding is in vogue. The native looks only to quantity ; and takes no heed of quality. Every head of cattle counts, irrespective of its characteristics.

**horse-sickness.** There are but few districts in Bechuanaland where horse-sickness is not prevalent. Some seasons are worse than others. It has been observed by the inhabitants that, the more the veld is trampled or eaten-down, the less horse-sickness there is. The

## BECHUANALAND

healthiest district for horses is that known as Daniels Kuil on the southern boundary adjacent to Griqualand West.

The population consists of about 1,300 whites, 7,500 coloured persons, 50,000 natives. **Population.**

Malaria infests most parts of the country : but it is much less prevalent and certainly much less virulent than it used to be. **Malaria.**

Farm labour is plentiful ; but, in comparison with those of other colonies, Bechuanaland labourers are rather expensive : 10s. to 15s. a week is the average rate of wages ; and the native provides himself with all his requirements. Herd-boys can be obtained at 10s. to 15s. a month. **Black labour.**

The Rhodesian Railway runs along the eastern border of this territory ; and there are numerous stations at convenient intervals. **Railway.**

The Cape Government ought to exert itself in various directions for the good of Bechuanaland. The most prominent and urgent needs are as follows :— **An opinion.**

- (1) Farmers must be assisted to search for, and to develop, the subterranean sources of water which are known to exist, as well as those which at present are unknown.
- (2) A compulsory Fencing Act ought to be passed, and put into effect.
- (3) The Outspans (governmental and private) must be fenced.
- (4) Some of the numerous public roads ought to be closed, or fenced ; or assistance given to the owners of the land to enable them to close or fence the said roads.
- (5) A compulsory Branding Act passed, and put into effect in connection with all cattle belonging both to whites and natives, would have good effect.



## **SOUTH AFRICA**

These things having been done, as a minimum, the country will become what it is not now, viz.—an attractive field for the operations of white men possessed of capital, experience and energy.

## British Bechuanaland Protectorate

**T**HIS vast territory is a continuation of British Bechuanaland. It has an area of 386,000 square miles ; and lies to the west of the German possessions, and to the east of the Transvaal, Tati Concession, BRITISH SOUTH AFRICA COMPANY's territory, and a strip of land granted to the Rhodesian Railway.

Large areas are administered by the BRITISH SOUTH AFRICA COMPANY. The dense native population is under Chiefs, of whom Khama is the most civilized and the most influential. The conditions of climate, soil, water, vegetation, resemble those of British Bechuana-land : but, owing to the average lower altitude of the Protectorate, malaria is more prevalent and probably more virulent.



# Rhodesia

## I

**T**HE vast territory which has been assigned to the **BRITISH SOUTH AFRICA COMPANY**, to which the eponym "Rhodesia" has been given, covers an area of about 750,000 square miles. The R. Zambesi divides it into two great divisions, respectively called Northern Rhodesia and Southern Rhodesia. Southern Rhodesia includes two provinces, Matabeleland and Mashonaland. Northern Rhodesia is sub-divided into the North-eastern and the North-western Provinces. These enormous areas exhibit most of the physical and geological features which are characteristic of the rest of South Africa, but intensified and on a much greater and broader scale. They have larger rivers, heavier rainfall, more numerous springs, vaster and denser forests, wider alluvial plains.

Southern Rhodesia lies between R. Zambesi on the north and R. Limpopo on the south. It has an area of about 192,000 square miles. The major portion belongs to the great upper plateau of South Africa : a plateau which is diversified by undulating plains, steep peaks and ridges rising in abrupt crags or gentle slopes, producing a surface suited to a diversity of animal-and vegetable-life. The bracing altitudes of the Highlands especially should become notable nurseries for a dynamic race of white men ; and are in every way suited to the needs of those of our surplus population

**Area.**

**Divisions.**

**Features.**

**Area of  
Southern  
Rhodesia.**

**The bracing  
highlands.**

## SOUTH AFRICA

who desire scope for energy in sane and vigorous occupation on the land.

**Altitudes.** The elevation of the minor plateaux varies from 3,000 to 6,000 feet above sea-level. Bulawayo has an altitude of 4,469 feet. It is the chief town of Matabeleland, and is situate on the auriferous area known as the Bulawayo Gold Belt. Salisbury, the chief town of Mashonaland and political capital of Southern Rhodesia, lies at an altitude of 4,825 feet above the level of the sea ; and, further eastward, in the Inyanga District, the elevation rises to 6,000 feet.

**Watershed.** The Highlands, or watershed of Southern Rhodesia, is an important feature of the country from the gold miner's as well as from the farmer's point of view. It extends from the Southern Boundary in a north-easterly direction to the Eastern Boundary in Portuguese territory. It is intersected by gold reefs, fertile valleys, rivers and streams : the last exhibiting a more reliable supply of water all the year round than the streams of any other colony save those of Natal. This watershed, sometimes known as "The Divide," is the catchment-area of the water-source of almost all rivers and springs in Southern Rhodesia. Streams which rise on its northern slope flow in a N. and NW. direction toward R. Zambesi : those which rise on its southern slope flow in a S. direction toward R. Limpopo. Deep channels have been eroded by these rivers, as is usual in South Africa : valleys have been denuded of their soil in many instances : while other areas have been embellished with enormous deposits of alluvial soil, rich in plant food and of everlasting fertility. Some of these alluvial tracts of land are narrow : others, of great length and breadth, extending over hundreds of square miles. Up to the present time, very few of them are cultivated or inhabited by white men, notwithstanding that they offer exceptional facilities for irrigation at a comparatively small outlay.

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The major part of these Highlands is formed of grey granite, gneiss, metamorphic schists and slates containing numerous veins of quartz, which in remote ages were worked extensively by the mysterious ancient inhabitants of Rhodesia, and now are being exploited for the extraction of gold and copper. These rocks cover an area which is estimated roughly at about 140,000 sq. miles: the remainder of the Highland District consisting of volcanic rock and sandstone. This part of the country has been carefully surveyed and mapped for mineral purposes. It is divided into farms, many of which are held in blocks by the Rhodesian Land Companies and sundry settlers: while the BRITISH SOUTH AFRICA COMPANY still holds enormous and valuable areas at the disposal of new settlers. It is necessary to mention here that, although the rocky districts of these highlands are thus accurately known, the area of the sedimentary beds is as yet almost unexplored. The present maps of Rhodesia, in so far as they define the tracts north and south of the gold-belt, are compiled mainly from casual sketches made by hunters and amateur prospectors.

The North-eastern Province is administered by the BRITISH SOUTH AFRICA COMPANY. It lies more than 3,000 feet above sea level; and its area is about 120,000 sq. miles, excluding a portion of Loangwa Valley. The most elevated portion of the country is that known as the Tanganyika plateau. Its average altitude is 5,000 feet; and it forms a watershed between R. Congo on the north and R. Zambesi on the south. Lake Tanganyika itself is 2,700 feet above sea-level. The country rises abruptly from that to over 4,500 feet: which altitude is maintained and exceeded across the plateau to within 30 miles of Lake Nyasa. This stretch of land is badly watered and sparsely populated. It slopes towards the Awemba country: which lies 4,000 feet above the sea, and is densely populated

**Formation.**

**Farms.**

**Area of  
the North-  
eastern  
Province.**

**Altitudes.**

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- Surface.** by natives. It also is well-wooded and well-watered by the Chambesi River and its tributaries, as well as by numerous considerable streams which flow into Lake Bengweulu. To east and west, the country rises to undulating tablelands. The Angoni and Senga countries have an altitude of 3,000 to 3,500 feet, forming the watershed between Lake Nyasa and the tributaries of R. Zambesi. They are fertile and populous areas, having an abundance of wood, water, and vegetation. The south-west of Lake Tanganyika is a level fertile populous country intersected by large areas of swamp, which are drained by considerable rivers.
- Lakes and Rivers.** The most remarkable and, perhaps, the most interesting physical features of North-eastern Rhodesia are the enormous lakes and rivers which are partly contained within its borders. Lake Bengweulu, 3,800 feet above sea-level, has an area of 1,600 sq. miles; and is the meeting-place of many rivers. Lake Mweru has an area of 1,700 sq. miles, being 68 miles long and 25 miles wide. There also are many *vleis* and pans scattered over the country.
- Area of the North-western Province.** The North-western Province is known commonly as Barotseland. It is administered by the BRITISH SOUTH AFRICA COMPANY. It includes all the territory north of R. Zambesi, and is bounded by the German South-west African Protectorate, and Portuguese West Africa, R. Kafue or Loengi, and R. Zambesi. It is divided into districts and stations.
- Surface.** The plateaux are extensive, and have an average altitude of 3,000 to 4,000 feet: but Kalomo is 4,500 feet above sea-level. There are large areas of sand-belts, marshes, forests, alluvial pockets, and some exceedingly rich and fertile plains. An important feature of this province is the Barotse Valley. It is surrounded by forests; and, in it is situate Lialui, the chief town of King Lewanika. It is a low-lying plain of 90 to 100 miles  $\times$  20 to 30 miles, with R. Zambesi in

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the centre. Major A. St. H. Gibbons describes it as follows :—

“ A huge treeless alluvial plain, free from ‘ fly,’ and giving “ good winter pasture.”

King Lewanika and his subjects are much attached to this valley. Once a year it is flooded as completely as is the valley of the Nile. Hence its notable fertility, which enables all kinds of crops to flourish luxuriantly.

**A fertile valley.**

Large tracts of the land are healthy ; and suitable in every way for Europeans. In the Barotse Valley the average rainfall is 34", i.e. equal to the average English rainfall. Pasturage is good ; and cattle thrive in most districts. The Kalomo district is extremely healthy, and practically free from mosquitoes. It is well-watered ; and is swept by a healthy north-west breeze, which does not traverse malarial districts or swamps. The following description by Major Coryndon, the Administrator, is interesting :—

**Health.**

“ The river has now (January 28th) been brimming its “ banks for some days, and the water is creeping slowly “ along the hollows of the plain. In another three weeks the “ canoes will begin to travel over the footpaths, and in six “ or eight weeks a view from my present camp at Mongu “ would show a waste of yellow water with now and then a “ little kraal perched upon an anthill showing above the “ water, dozens of small canoes crawling about where lands, “ huts, paths, and cattle kraals used to be. The flood is “ usually at its height during the first week in April, and from “ that time it slowly subsides, leaving grass six to ten feet “ long, and the whole valley reeking with rotten and rotting “ vegetation. It does not need expert knowledge to prove “ the fact that at this time of the year, and for one or two “ months afterwards, the whole valley is merely a hotbed for “ malarial poison.

“ Towards the end of the dry weather the plain still pre- “ sents a green appearance, and feeds thousands of very fine “ cattle ; during the flood every head is sent up to the mosito “ or sand-belts and in fact but few natives remain in the “ flooded valley. The king moves off to the forest as soon as “ the water is high enough to float his big canoes just outside “ Lialui. Kraals are dotted everywhere and every little



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“pool holds numbers of ducks, geese, egrets, and a large variety of wild fowl. The heaviest population, however, is immediately under the sand-belts. There are hundreds of small kraals in an almost endless chain following the course of the belts; each kraal is buried in its lands, and now, at this time of the year one can ride mile after mile along the edge of the sand hills, without seeing more than the tops of the huts buried and smothered in a perfect wealth of mealie, Kaffir corn, sugar-cane and medanja (manioc) lands. Famine is unknown in the valley, for locusts do not do much harm to the lands where there is such an abundance of green stuff, and the soil—like that part of the Nile annually inundated—is very rich, for it is, to an extent, renewed every year. On those parts of the valley raised slightly above the neighbouring ground—though nevertheless covered by the floods—the white sand shews out with tufts of tough grass, but generally even this sand is so impregnated with the alluvial loam carried down every year and sifted out over the whole valley, that it will grow a very fair crop.”

### **Description of District.**

Many of the districts of Rhodesia, at present are inhabited by white people; and the satisfactory accounts which I received from residents, impressed me very favourably.

### **In Melssetter**

The Melssetter district, on the eastern border of Mashonaland is exceptionally suitable for mixed farming. Cattle, horses, and sheep, do remarkably well. The veld is good: water is plentiful; and the rainfall and climate are the best in Rhodesia. The few Dutchmen, who got as far as Rhodesia, were not long in discovering the best soil. They trekked all over the country until they were satisfied that they had found a plot of land “flowing with milk and honey.” The holdings, which they staked out are large—much too large for their purpose—: but it is the Dutchman’s peculiar way to occupy all the land which he can get, in order to avoid the excessively unpleasing spectacle of a neighbour’s chimney. Still, at present there are openings, in this favoured dis-

### **The Dutch way.**

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tract, for energetic farmers who are prepared to contend with the only two drawbacks, viz.—the lack of means of transport, and the diseases of cattle.

Inyanga, which lies further north, is another favourite country for white settlers. It is high and bracing; and the land is generally good. Formerly it was peopled by an ancient mysterious race, who worked its gold-mines. Relics of their occupation still exist. One of these is a well-constructed water-furrow for irrigation. At present it fulfils its original purpose on a farm belonging to the late Cecil Rhodes. Owing to its great altitude, Inyanga is sometimes intensely cold. Cattle and horses, therefore, require shelter and winter-fodder. Merino-sheep thrive very well in this district. **In Inyanga.**

Charter, another district of Mashonaland is especially suitable for stock. Many farms already occupied, besides affording good pasturage for stock, produce good crops of mealies, potatoes, oat-hay and wheat. Enkledoorn, the township of this district, lies in a rich valley. The farms in the vicinity are chiefly occupied by Boers who carry on the usual Boer system of agriculture. The soil contains nitre; and is in every way suitable for tobacco, of which herb a very fine-flavoured species is produced. The Charter farmers, who have had experience of other parts of South Africa, say that cattle thrive better in this district than elsewhere. **In Charter.**

Rhodesia Lands, Limited, has recently acquired from The United Rhodesia Gold-Fields Company some good farms in Rhodesia. Borrowdale, a farm of theirs, situate a few miles north of Salisbury, is one of the best managed farms which I have seen in South Africa. I refer to the manager of the farm, in my remarks on cotton-growing. It is my duty to congratulate the Rhodesia Lands Company on the possession of a practical and energetic man, whose **In Borrowdale.**

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experiments on this farm should prove invaluable when they are recorded.

**In the Mazoe District.**

There are some good farms in the Mazoe district, where cereals are grown with great success. This district has some very practical farmers, who (with luck) ought to derive great benefit from their operations.

**With the Jesuits of Chisawasha.**

I visited the Jesuit Mission at Chisawasha, a large farm about 24 miles E. of Salisbury. The Superior, Father Rechartz, is one of the most popular personages in the country. He had a mission in the Transvaal before (at the Occupation of Rhodesia) he established himself on the farm which was granted him by the BRITISH SOUTH AFRICA COMPANY. I visited many missions during my travels in South Africa : but I never have seen anything to compare with Chisawasha. Here are system and order. Natives are well cared-for in every way, and taught to read and write : but the first thing which is instilled into their minds is that everyone must work. They work like clock-work : the fathers also work : the lay-brothers work : the sisters (who formerly did all the nursing in the Salisbury Hospital) have their separate convent at Chisawasha, where they also work, teaching the native girls, and are always ready to go anywhere at a moment's notice to nurse the sick. And the natives have been taught that there is dignity in work. The result is that the whole farm of Chisawasha is a garden. I noted groves of bananas, apples, oranges, and every conceivable fruit. The adjacent fields cultivated to perfection, yielded fine crops of mealies, oat-hay, potatoes, and wheat. A band of eighty performers played for my amusement and edification. The house-buildings and the imposing church were built by the brothers themselves, all materials being carted from Salisbury, and paid-for by the produce of the farm. I cannot leave the subject

**" Laborare est orare."**

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without expressing my humble opinion that at least as pioneers of civilization in savage countries, the sons of St. Iñigo Lopez de Recalde have no equal, judging from what I saw at Chisawasha.

Marandellas, another district of Mashonaland, is very healthy and well pastured. It is in every way suitable for stock-farming, as the railway from Salisbury to Beira traverses it, affording facilities for transport.

In Marandellas.

Insiza is one of the most favoured districts of Matabeleland. It is a rich alluvial valley of exceedingly fertile soil, well-watered, and quite suitable for mixed farming. One of the leading men of Insiza is Mr Rixon, a pioneer of the country, and an energetic bonafide and most practical farmer, who makes his farm pay. This district affords plenty of scope to men with a predilection for well-watered fertile soil.

In Insiza.

Concerning Mr. Rixon.

Major Heany has succeeded in establishing a drove of cattle on the Essexvale property, which belongs to the Matabele Gold Reefs and Estates Company. This estate is fenced; and the cattle so far are free from Redwater. That fact is a valid argument in favour of fencing and isolation. Major Heany is developing the Essexvale Estate in a systematic manner. Large portions are under irrigation. Some of these are let to tenants at 20s. an acre. If all the Land Companies (which own farms in Rhodesia) were to imitate the admirable example of the Matabele Gold Reefs and Estates Company, there might be something more extensive in the way of progress to report.

Concerning Major Heany.

The Khami Valley (in close proximity to the Vryburg-Bulawayo section of the Rhodesian Railway) is a very fertile area of Matabeleland. Many fine farms are situate here, some vacant and some occupied. Among the latter, Mr. Dan Vincent's farm deserves mention. The Shangani Valley and the Fig-Tree and Plum-

In Khami Valley.

Concerning Mr. Vincent.

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Tree districts, are very suitable areas for stock-farming and mealie-culture.

**Districts of  
N.E.  
Province.**

The North-Eastern Province is divided into districts. The BRITISH SOUTH AFRICA COMPANY's officers are established throughout this vast area. The natives, numbering about 256,000, give no trouble, being very submissive and satisfied with the new order of things. They pay their taxes; and are not unwilling to work for the white man. A few enterprising store-keepers have fixed themselves at various points; and a few farmers and stock-raisers find the country very promising for agriculture and pasturage. The Company owns large droves of cattle and supplies settlers with breeding-stock on most advantageous terms. Grazing land is practically free. Excellent pasturage may be secured now at very small outlay.

**Natives.**

**Free grazing.**

**A healthy  
Country.**

As the country has been proved, for ages by the natives and latterly by the white man, to be a healthy cattle country, no great risk attends investment in land or cattle in North-eastern Rhodesia.

**Victoria  
Falls.**

The chief feature of Matabeleland, of Rhodesia, of South Africa, the "Eighth Wonder of the World," undoubtedly is the Victoria Falls on R. Zambesi, which were discovered by Dr. Livingstone in 1854. Above the Falls, the river is 1,936 yards (or well over a mile) in width. Here it precipitates itself 400 to 420 feet into a volcanic rift in black basalt rocks, throwing up columns of spray to a height of more than 1,100 feet. The bottomless chasm into which the boiling torrent falls is not more than 15 to 20 yards wide. Towards the east there is a gap, in the perpendicular walls, only 100 yards in breadth, "through which the whole of the concentrated Zambesi rushes with incredible speed, fury, and confusion," escaping by the singularly close huge zigzags of a gorge or cañon forty-five miles in length. A

## RHODESIA

comparison of these dimensions, with those of the celebrated American waterfall, puts Niagara in its proper proportion. I will place the figures side by side in order that an accurate idea may be attainable.

	<i>Victoria Falls.</i>	<i>Niagara Falls.</i>
Width of river at fall . . . . .	over a mile	about $\frac{1}{2}$ mile.
Depth of fall . . . . .	400-420 ft.	158-167 ft.
Horse-power . . . . .	35,000,000 H.P.	7,000,000 H.P.

It is not necessary for me to dilate upon the beauty and splendour of this unique masterpiece of Nature. That already has been done by eminent writers like Dr. Livingstone, Mr. Thomas Baines (who wrote in 1862), and Mr. E. F. Knight (the distinguished war-correspondent of the *Morning Post*, who wrote quite recently). My office is purely practical ; and confines me to consider the relation which the Victoria Falls bears to the agricultural and pastoral prospects of South Africa. I have no hesitation in describing this as most momentous: for it means the "harnessing" of the illimitable force of the water, and the transmission of electric power all through Rhodesia, at least within a radius of 300 miles. This work already is contemplated by the African Concessions Syndicate, Ltd., under the Chairmanship of Mr. W. A. Wills. In a highly mineralized country like Rhodesia, the applications of electricity will be almost numberless. Mr. Francis Fox, writing in "Cassier's Magazine," says :

"Gold mines to the south-east, the coal mines of Wankie, and the Imperial copper deposits in Barotseland, which are believed likely to prove among the greatest in the world, would all require power to a very large extent. Chemical and metallurgical industries will be attracted ; and, if alluvial gold deposits exist, as reported, in the vicinity of the Falls, they might be cheaply worked by 'hydraulicizing,' that is, washing down the beds by powerful water-jets supplied by electrically driven pumps. Water also would be required for irrigation ; and ploughing, sawing timber, and



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strata and vegetable-matter all washed-down and deposited-together by the rains, cannot be surpassed for fertility and reproductive power.

**An opinion.**

**One of Rhodesia's most valuable assets.**

**Abundance of water.**

**The best soils.**

**Nature's methods should be imitated by farmers.**

These enormous tracts of rich alluvial soil, in the valleys and on some of the plains in the Highlands, are among the most valuable assets of Rhodesia. They lie in parallels at regular intervals across the watershed from north to south. Each rich alluvial valley is traversed by a river or stream of perennially flowing water. Springs are numerous ; and many more could be developed at small cost. The climate, also, of these valleys is healthy and bracing ; and many thousands of farmers engaged in mixed farming and stock-raising could find pleasurable and profitable occupation here.

Apart from these alluvial areas, the best all-round soils are found where the rocks have come together naturally. Granite and greenstone (or trap) produce a very fertile soil : because the lime, magnesia, and oxide of iron, which granite lacks, are supplied by the greenstone. Where these rocks are intimately blended, the soil is invariably good. Now, when we know that this process, as carried out by Nature, gives a good result, the logical consequence, viz. the imitation of Nature's methods, ought not to be neglected by the Rhodesian farmer. There need be no difficulty whatever about it : for the necessary material is generally close at hand ; and the experiment is of the simplest. A top-dressing of granite-soil on peat, of greenstone or peat-soil on granite, of clay-soil on sand or peat, will work a complete change in the chemical constitution of the soil by a single mechanical operation. And while I am dealing with this subject I will add that many of the Rhodesian valleys, which are covered with an impervious clay, would give excellent results if an admixture of sand were effected. In this simple way the physical properties of the impervious clay would be improved, by opening its pores and rendering it permeable by air and



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water. Improvement of the soil by scientific methods is practically unknown in Rhodesia and throughout South Africa. The permanent advantage of such improvement would become manifest, in the greater productiveness under less manure which would accrue, as well as in the enhanced value of the land.

**Enhanced  
value of  
land.**

Soil, formed from secondary or sedimentary beds in Rhodesia, is generally more fertile than that formed from the primary rocks : but all the soils of the country, (except the alluvial,) when exposed to excessive heat and other climatic influences, become exhausted after producing three or four crops in succession without manure.

**Exhaustion.**

Red soils cover a considerable area. They generally contain 60% - 70% of silicates. In some places they exhibit excess of ferruginous matter, are rich in organisms, but deficient in lime and phosphoric acid and nitre. An English farmer probably would treat these red soils with a dressing of basic slag containing about 40% of lime and 15% - 16% of phosphoric acid : but the price, at which this dressing could be placed on the Rhodesian market, would prohibit its use as a fertilizer. Lime, however, is plentiful in some districts : for example, a good limestone lies N. of Salisbury. A good dressing of lime, which does not contain too much magnesia, would be the cheapest and most effective dressing for the red soils. Its price would be no more than one-third the price of the so-called commercial fertilizers ; and it would prove most beneficial to the cultivated lands and also to pasturage, where it would improve the production as well as the quality of the grass.

**Red soils.**

**Method of  
treatment.**

The black-loam soils of Rhodesia contain more lime than the red-loam soils. This is the rule ; to which I noted some exceptions.

**Black-loam  
soils.**

The boggy-peaty soil is devoid of lime, and contains 60% - 80% of vegetable matter. Without an admix-

**Boggy-peaty  
soils.**

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ture of sand or clay, it is unsuitable for cereals or pasturage.

**Specific gravity of soils.**

**Stiff clay.**

**Rich loam.  
Clayey loam.**

**Sandy soil.**

The specific gravity of Rhodesian soils varies considerably. Sandy soils have a specific gravity equal to nearly twice the specific gravity of water. They also are deficient in phosphoric acid. Stiff clay soil, (such as is to be found in patches on the Rhodes Farm near the Matoppos,) is about  $\frac{1}{4}$ th lighter than its own bulk of sandy soil. And a rich loam on the same farm is the lightest soil of all. Clayey loam absorbs two or three times as much water as sandy soil. Sandy soil loses (by evaporation) the same amount of water as is held by clay-loam, in one-third of the time. This explains the quickness with which vegetation withers on sandy soil. These sandy soils of Rhodesia, which have so limited a capacity for absorbing water and so contemptible a capacity for retaining the same, are not as favourable to the agriculturist as are the soils which behave differently under similar caprices of climate.

**Soil colour affected by heat.**

Absorption of heat varies according to the colour of the soil. The rule is that the darker the colour of the soil the more readily it absorbs and radiates heat ; and the lighter the colour, the longer it retains its natural coolness. I tested the temperature of some of the Rhodesian soils : and obtained the following results on the thermometer :—

Atmosphere	.	.	.	.	80° Fahr.
Very rough coarse sand	.	.	.	.	128° "
Black peaty soil	.	.	.	.	120° "
Rich brown loam	.	.	.	.	114° "
Reddish-yellow soil	.	.	.	.	102° "
Very light coloured soil	.	.	.	.	88° "

**Soil temperature affected by angle.**

I do not attach much value to this test : for I afterwards found that the same soil exhibited different temperatures according to the angle of the land's aspect to the rays of the sun. When the land sloped

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at an acute angle it appeared to receive the maximum amount of heat. It was very notable that hills which sloped in different directions exhibited total differences of temperature, soils, and vegetation. Those which sloped away from the sun were by far the coolest; their soil contained more moisture: their vegetation was more luxuriant and more succulent. The greater the specific gravity of the soil, so much the greater is its power of retaining heat. This, in a subtropical climate, is a drawback. Some soils are known to have been completely sterilized by heat.

**Heat as a  
sterilizer.**

I noted that plants and grain ripened earlier in dark-coloured than in light-coloured soils. Mildew and fungus are more prevalent on light than on loamy clay-soils. The earlier the cereal crops were, the less were they affected by fungoid parasites. I already have treated of the subject of deep ploughing in my general chapter on soils. I will mention here that injurious insects are more numerous where ploughing is deep, than they are where it is shallow. I can account for this only by the theory that insect-pests delve as deeply as possible in the soil in order to escape the attention of the many birds which prey upon them.

**Effects of  
light and  
dark soils.**

## III

Even if all the soils of South Africa were similar in quality and equal in value, there still would remain the question of altitude which limits the cultivation of vegetable-life. Granite-soils especially depend for their fertility on elevation and exposure. In England we know that artificial grasses will not thrive at an elevation of more than 1,500 feet above the level of the

**VEGETA-  
TION.**

**Vegetation  
limited by  
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## SOUTH AFRICA

sea: but what shall we say of South Africa, where altitudes vary from 15 feet to 12,000 feet and more in mountainous districts and where the average altitude is 3,000 to 4,000 feet?

**Vegetation  
affected by  
altitude.**

I need not draw comparisons between the luxuriant growth of the vegetation in the rich valley-soils of Rhodesia and the stunted and stunted character of the vegetation produced in poor soils. I only will say that such luxuriance of foliage and roots and sap denotes also an increase in the nutritious qualities of the herbage and consequently, in its agricultural and pastoral value. I noted that, in an arid situation, the branches of shrubs and trees tend to shorten and to stiffen while the thorns become more thorny: and that, in a humid situation, the contrary effect was manifest.

**General  
vegetation.**

The general vegetation of Rhodesia is as various as the soils and climatic conditions. Matabeleland, Mashonaland, and large areas in the North-eastern and North-western Provinces, have a better grass-covering than most other parts of South Africa. Matabeleland pasture is close and sweet. Judging from the stock which thrives thereon, it possesses nutritious qualities which are of a higher order than those of any South African Colonies. Mashonaland pasture is much longer and coarser and not so suitable for stock, except in some districts where continuous grazing has been going on for ages.

**Matabele-  
land.**

**Mashona-  
land.**

**Matabele-  
land for  
stock.**

**Mashona-  
land for  
agriculture.**

Matabeleland stands unrivalled in South Africa for stock-farming. Mashonaland, owing to its greater rainfall and humidity and the richness of its soil, is more suitable for agriculture.

**Rhodesian  
Grasses.**

A long sojourn in Rhodesia is necessary in order to obtain a practical knowledge of the various grasses, the indigenous genera being very numerous. The farmers hitherto have neglected the study of vegetable-life; and, in most cases, are quite ignorant of the economy of the grasses and plants on which their stock

## RHODESIA

depends. It would pay the farmers to investigate the question of the digestibility of grasses, rough and coarse, at different periods of their growth, not only at the time of grazing but also, when used as fodder in the form of hay. Close-cropping of pasturage by stock in late autumn, for example, leaves the root with little or none of the sap which is so useful to the growth of grass ; and prevents the vigorous renewal of the pasture in early spring. The numberless genera of grasses and plants which compose the pasture of the country, the different periods of their development, the infinite varieties of soil on which they sprout, the climatic conditions which govern their existence, and their structural constitution, form a most complicated subject for investigation. Some indigenous grasses propagate themselves by seed : others, by root-layers : others, again, by surface-layers. The last are more flourishing than all the rest. The specific differences in the products of the various grasses prove that the different species derive different products from the soil. Vegetation, which is characterized by a small system of foliage, proportionately exhausts the soil of more common nutritive matter than large-leaved vegetation. I noted one place where a great dam had been erected. The surface had been scooped from a large area of land close by, and transferred to the embankment of the dam. A fine indigenous grass was growing most luxuriantly on the exposed soil. Its mat-like appearance did not resemble that of any South African grass known to me ; and I at first took it for the produce of imported seed. Where sheep and cattle could graze, there was very little of it left. Stock of all kinds rushed for it, and never tired of nibbling it to the very roots. The farmer only could account for it by saying that it was of spontaneous growth. I noted a verisimilar phenomenon on a railway-cutting east of Bloemfontein. The surface soil had been removed, and thrown aside

## SOUTH AFRICA

experiments on this farm should prove invaluable when they are recorded.

**In the Mazoe District.**

There are some good farms in the Mazoe district, where cereals are grown with great success. This district has some very practical farmers, who (with luck) ought to derive great benefit from their operations.

**With the Jesuits of Chisawasha.**

I visited the Jesuit Mission at Chisawasha, a large farm about 24 miles E. of Salisbury. The Superior, Father Rechartz, is one of the most popular personages in the country. He had a mission in the Transvaal before (at the Occupation of Rhodesia) he established himself on the farm which was granted him by the BRITISH SOUTH AFRICA COMPANY. I visited many missions during my travels in South Africa : but I never have seen anything to compare with Chisawasha. Here are system and order. Natives are well cared-for in every way, and taught to read and write : but the first thing which is instilled into their minds is that everyone must work. They work like clock-work : the fathers also work : the lay-brothers work : the sisters (who formerly did all the nursing in the Salisbury Hospital) have their separate convent at Chisawasha, where they also work, teaching the native girls, and are always ready to go anywhere at a moment's notice to nurse the sick. And the natives have been taught that there is dignity in work. The result is that the whole farm of Chisawasha is a garden. I noted groves of bananas, apples, oranges, and every conceivable fruit. The adjacent fields cultivated to perfection, yielded fine crops of mealies, oat-hay, potatoes, and wheat. A band of eighty performers played for my amusement and edification. The house-buildings and the imposing church were built by the brothers themselves, all materials being carted from Salisbury, and paid-for by the produce of the farm. I cannot leave the subject

**"Laborare est orare."**

## RHODESIA

without expressing my humble opinion that at least as pioneers of civilization in savage countries, the sons of St. Iñigo Lopez de Recalde have no equal, judging from what I saw at Chisawasha.

Marandellas, another district of Mashonaland, is very healthy and well pastured. It is in every way suitable for stock-farming, as the railway from Salisbury to Beira traverses it, affording facilities for transport.

In Marandellas.

Insiza is one of the most favoured districts of Matabeleland. It is a rich alluvial valley of exceedingly fertile soil, well-watered, and quite suitable for mixed farming. One of the leading men of Insiza is Mr Rixon, a pioneer of the country, and an energetic bonafide and most practical farmer, who makes his farm pay. This district affords plenty of scope to men with a predilection for well-watered fertile soil.

In Insiza.

Concerning Mr. Rixon.

Major Heany has succeeded in establishing a drove of cattle on the Essexvale property, which belongs to the Matabele Gold Reefs and Estates Company. This estate is fenced; and the cattle so far are free from Redwater. That fact is a valid argument in favour of fencing and isolation. Major Heany is developing the Essexvale Estate in a systematic manner. Large portions are under irrigation. Some of these are let to tenants at 20s. an acre. If all the Land Companies (which own farms in Rhodesia) were to imitate the admirable example of the Matabele Gold Reefs and Estates Company, there might be something more extensive in the way of progress to report.

Concerning Major Heany.

The Khami Valley (in close proximity to the Vryburg-Bulawayo section of the Rhodesian Railway) is a very fertile area of Matabeleland. Many fine farms are situate here, some vacant and some occupied. Among the latter, Mr. Dan Vincent's farm deserves mention. The Shangani Valley and the Fig-Tree and Plum-

In Khami Valley.

Concerning Mr. Vincent.

## SOUTH AFRICA

Tree districts, are very suitable areas for stock-farming and mealie-culture.

**Districts of  
N.E.  
Province.**

The North-Eastern Province is divided into districts. The BRITISH SOUTH AFRICA COMPANY's officers are established throughout this vast area. The natives, numbering about 256,000, give no trouble, being very submissive and satisfied with the new order of things. They pay their taxes; and are not unwilling to work for the white man. A few enterprising store-keepers have fixed themselves at various points; and a few farmers and stock-raisers find the country very promising for agriculture and pasturage. The Company owns large droves of cattle and supplies settlers with breeding-stock on most advantageous terms. Grazing land is practically free. Excellent pasturage may be secured now at very small outlay.

**Natives.**

**Free grazing.**

**A healthy  
Country.**

As the country has been proved, for ages by the natives and latterly by the white man, to be a healthy cattle country, no great risk attends investment in land or cattle in North-eastern Rhodesia.

**Victoria  
Falls.**

The chief feature of Matabeleland, of Rhodesia, of South Africa, the "Eighth Wonder of the World," undoubtedly is the Victoria Falls on R. Zambesi, which were discovered by Dr. Livingstone in 1854. Above the Falls, the river is 1,936 yards (or well over a mile) in width. Here it precipitates itself 400 to 420 feet into a volcanic rift in black basalt rocks, throwing up columns of spray to a height of more than 1,100 feet. The bottomless chasm into which the boiling torrent falls is not more than 15 to 20 yards wide. Towards the east there is a gap, in the perpendicular walls, only 100 yards in breadth, "through which the whole of the concentrated Zambesi rushes with incredible speed, fury, and confusion," escaping by the singularly close huge zigzags of a gorge or cañon forty-five miles in length. A



## RHODESIA

comparison of these dimensions, with those of the celebrated American waterfall, puts Niagara in its proper proportion. I will place the figures side by side in order that an accurate idea may be attainable.

	<i>Victoria Falls.</i>	<i>Niagara Falls.</i>
Width of river at fall . . . . .	over a mile	about $\frac{1}{2}$ mile.
Depth of fall . . . . .	400-420 ft.	158-167 ft.
Horse-power . . . . .	35,000,000 H.P.	7,000,000 H.P.

It is not necessary for me to dilate upon the beauty and splendour of this unique masterpiece of Nature. That already has been done by eminent writers like Dr. Livingstone, Mr. Thomas Baines (who wrote in 1862), and Mr. E. F. Knight (the distinguished war-correspondent of the *Morning Post*, who wrote quite recently). My office is purely practical ; and confines me to consider the relation which the Victoria Falls bears to the agricultural and pastoral prospects of South Africa. I have no hesitation in describing this as most momentous : for it means the " harnessing " of the illimitable force of the water, and the transmission of electric power all through Rhodesia, at least within a radius of 300 miles. This work already is contemplated by the African Concessions Syndicate, Ltd., under the Chairmanship of Mr. W. A. Wills. In a highly mineralized country like Rhodesia, the applications of electricity will be almost numberless. Mr. Francis Fox, writing in " Cassier's Magazine," says :

" Gold mines to the south-east, the coal mines of Wankie, " and the Imperial copper deposits in Barotseland, which are " believed likely to prove among the greatest in the world, " would all require power to a very large extent. Chemical " and metallurgical industries will be attracted ; and, if " alluvial gold deposits exist, as reported, in the vicinity of " the Falls, they might be cheaply worked by ' hydraulicking, ' " that is, washing down the beds by powerful water-jets " supplied by electrically driven pumps. Water also would " be required for irrigation ; and ploughing, sawing timber, and

## SOUTH AFRICA

"all kinds of agricultural work could be carried on by electrically transmitted power. The great need for manufacturing, on the spot, all the various products which can be obtained from electrical energy is at once apparent, when it is remembered that at the present time these have to be obtained from America and elsewhere, and transported thousands of miles, by sea and land, to the numerous points of consumption within a moderate distance of the Victoria Falls. In other words, *both the necessary materials and the power are at the very doors of the Rhodesian Population and only wait to be rightly developed.*"

### II

#### SOILS.

##### **Sterile granite.**

Granite, and the soil which it produces, are generally associated (by agriculturists) with the idea of sterility. In many parts of South Africa, and certainly in Rhodesia, I found large areas of granite soil as unfertile and as poor in organic and inorganic matter as any soil could possibly be. I saw many areas which were dry, shallow, and coarse, generally parched, supporting only an occasional odd stunted sugar-bush, or a few low plants with dirty-looking dark-green leaves which had a large proportion of earth in their woody fibre. Many thousands of acres of such soils spread over the Highlands. From an agricultural standpoint they are of no value : from a pastoral standpoint they may be worth a few pence an acre. They invariably are to be found on steep slopes. On the gentle slopes of the same granite formation, however, the soil (as a general rule) is of a more valuable character.

##### **Examination of soils.**

I made a close examination of these soils, with the following results. Their respective consistencies, general texture, specific gravity, and capability of absorption, differed very materially. Burning the vegetation which was produced on the different slopes

## RHODESIA

gave ashes of different qualities. Yet the granite, from which the different soils were formed, exhibited no difference. It was composed of quartz, siliceous sands, and felspar. The soil on the steepest slopes, more especially on those which gave towards the rainy quarter, was the poorest soil. It had been exposed to the action of the heavy downpour of centuries of rainy weather, which had washed away all valuable elements. The soils on the gentler slopes, which were not so much exposed to the action of torrential rains, still retained some quantity of plant food. Consequently they were of a much smaller specific gravity ; and their vegetation was more extensive, with leaves of a brighter green and more abounding in sap. I also noted that the soil of the steep slopes had been deprived, not only of all vegetable matter but also, of the felspar of the granite which contains a large quantity of potash. The felspar, in being released from the granite in the form of fine dust, is carried away by the water to the lower valleys, where it forms a stiff impervious clay invariably sterile when deposited alone. There, it produces vegetation of poor quality. In dry weather, it becomes hard baked, shrinking and cracking in the progress. On the other hand, when the felspar remains with the other components of the crumbled granite rock on the gentler slopes, the soil has a certain fertility. It is not suitable for agriculture : although it possesses some value as pasturage because its grass is early and sweet in spring-time.

**Fertility  
influenced  
by angle of  
exposure.**

The soil, of those valleys which lie under granite slopes, varies considerably. Where its chief constituent is the decomposed felspar, it is unworkable. Where it is of a peaty nature, it is of little value : owing to the excess of vegetable matter which it contains : it is also unworkable by reason of its wetness in wet weather and its dryness in dry weather. Other valleys, however, which contained a miscellaneous mixture of the various

**Variation of  
granite  
soil.**

## SOUTH AFRICA

strata and vegetable-matter all washed-down and deposited-together by the rains, cannot be surpassed for fertility and reproductive power.

**An opinion.**

**One of Rhodesia's most valuable assets.**

**Abundance of water.**

**The best soils.**

**Nature's methods should be imitated by farmers.**

These enormous tracts of rich alluvial soil, in the valleys and on some of the plains in the Highlands, are among the most valuable assets of Rhodesia. They lie in parallels at regular intervals across the watershed from north to south. Each rich alluvial valley is traversed by a river or stream of perennially flowing water. Springs are numerous ; and many more could be developed at small cost. The climate, also, of these valleys is healthy and bracing ; and many thousands of farmers engaged in mixed farming and stock-raising could find pleasurable and profitable occupation here.

Apart from these alluvial areas, the best all-round soils are found where the rocks have come together naturally. Granite and greenstone (or trap) produce a very fertile soil : because the lime, magnesia, and oxide of iron, which granite lacks, are supplied by the greenstone. Where these rocks are intimately blended, the soil is invariably good. Now, when we know that this process, as carried out by Nature, gives a good result, the logical consequence, viz. the imitation of Nature's methods, ought not to be neglected by the Rhodesian farmer. There need be no difficulty whatever about it : for the necessary material is generally close at hand ; and the experiment is of the simplest. A top-dressing of granite-soil on peat, of greenstone or peat-soil on granite, of clay-soil on sand or peat, will work a complete change in the chemical constitution of the soil by a single mechanical operation. And while I am dealing with this subject I will add that many of the Rhodesian valleys, which are covered with an impervious clay, would give excellent results if an admixture of sand were effected. In this simple way the physical properties of the impervious clay would be improved, by opening its pores and rendering it permeable by air and

## RHODESIA

water. Improvement of the soil by scientific methods is practically unknown in Rhodesia and throughout South Africa. The permanent advantage of such improvement would become manifest, in the greater productiveness under less manure which would accrue, as well as in the enhanced value of the land.

**Enhanced  
value of  
land.**

Soil, formed from secondary or sedimentary beds in Rhodesia, is generally more fertile than that formed from the primary rocks : but all the soils of the country, (except the alluvial,) when exposed to excessive heat and other climatic influences, become exhausted after producing three or four crops in succession without manure.

**Exhaustion.**

Red soils cover a considerable area. They generally contain 60% - 70% of silicates. In some places they exhibit excess of ferruginous matter, are rich in organisms, but deficient in lime and phosphoric acid and nitre. An English farmer probably would treat these red soils with a dressing of basic slag containing about 40% of lime and 15% - 16% of phosphoric acid : but the price, at which this dressing could be placed on the Rhodesian market, would prohibit its use as a fertilizer. Lime, however, is plentiful in some districts : for example, a good limestone lies N. of Salisbury. A good dressing of lime, which does not contain too much magnesia, would be the cheapest and most effective dressing for the red soils. Its price would be no more than one-third the price of the so-called commercial fertilizers ; and it would prove most beneficial to the cultivated lands and also to pasturage, where it would improve the production as well as the quality of the grass.

**Red soils.**

**Method of  
treatment.**

The black-loam soils of Rhodesia contain more lime than the red-loam soils. This is the rule ; to which I noted some exceptions.

**Black-loam  
soils.**

The boggy-peaty soil is devoid of lime, and contains 60% - 80% of vegetable matter. Without an admix-

**Boggy-peaty  
soils.**

## SOUTH AFRICA

ture of sand or clay, it is unsuitable for cereals or pasturage.

**Specific gravity of soils.**

**Stiff clay.**

**Rich loam.  
Clayey loam.**

**Sandy soil.**

The specific gravity of Rhodesian soils varies considerably. Sandy soils have a specific gravity equal to nearly twice the specific gravity of water. They also are deficient in phosphoric acid. Stiff clay soil, (such as is to be found in patches on the Rhodes Farm near the Matoppos,) is about  $\frac{1}{4}$ th lighter than its own bulk of sandy soil. And a rich loam on the same farm is the lightest soil of all. Clayey loam absorbs two or three times as much water as sandy soil. Sandy soil loses (by evaporation) the same amount of water as is held by clay-loam, in one-third of the time. This explains the quickness with which vegetation withers on sandy soil. These sandy soils of Rhodesia, which have so limited a capacity for absorbing water and so contemptible a capacity for retaining the same, are not as favourable to the agriculturist as are the soils which behave differently under similar caprices of climate.

**Soil colour affected by heat.**

Absorption of heat varies according to the colour of the soil. The rule is that the darker the colour of the soil the more readily it absorbs and radiates heat ; and the lighter the colour, the longer it retains its natural coolness. I tested the temperature of some of the Rhodesian soils : and obtained the following results on the thermometer :—

Atmosphere	.	.	.	.	80° Fahr.
Very rough coarse sand	.	.	.	.	128° „
Black peaty soil	.	.	.	.	120° „
Rich brown loam	.	.	.	.	114° „
Reddish-yellow soil	.	.	.	.	102° „
Very light coloured soil	.	.	.	.	88° „

**Soil temperature affected by angle.**

I do not attach much value to this test : for I afterwards found that the same soil exhibited different temperatures according to the angle of the land's aspect to the rays of the sun. When the land sloped

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at an acute angle it appeared to receive the maximum amount of heat. It was very notable that hills which sloped in different directions exhibited total differences of temperature, soils, and vegetation. Those which sloped away from the sun were by far the coolest ; their soil contained more moisture : their vegetation was more luxuriant and more succulent. The greater the specific gravity of the soil, so much the greater is its power of retaining heat. This, in a subtropical climate, is a drawback. Some soils are known to have been completely sterilized by heat.

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## SOUTH AFRICA

to a depth of two or three feet. Here, young grass was growing thickly : although the adjacent surface-soil (which was black loam, deep and fertile,) bore hardly any vegetation at all. I had no time in which to investigate whether the top soil was brack, or whether it contained some noxious acids : nor am I able to suggest any explanation of so extraordinary a freak of nature. But I set down the fact as an example of the crying necessity for systematic scientific experiments on behalf of agriculture in Rhodesia.

**Experience  
of a pioneer  
agriculturist.**

Colonel Napier, one of the chief Agriculturists of South Africa, has proved the value of the indigenous grasses of South Africa as an asset. On his farm at Bulawayo, I saw no fewer than twenty hay-cutting machines at work, each drawn by a yoke of strong oxen. His hay-making machinery was entirely up-to-date. After some years' absence from England, it was quite refreshing to see (for the first time in South Africa) huge hay-stacks in process of erection, several horse rakes at work, waggons loading and unloading, the score of hay-cutters at work — in fact all the familiar paraphernalia of a wholesale hay-making establishment. In another part of this large farm, I saw the latest oil-engine and hay-press, by means of which the keen and scientific farmer is enabled to turn his wide acres to the best account, supplying customers at Kimberley with several hundred tons of excellent hay at £5-£6 per ton.

**Reward of  
scientific  
farming  
methods.**

The following important indigenous grasses are not yet classified botanically ; and, therefore, I can only refer to them by numbers, or (occasionally) by the name which they commonly bear :—

**Grasses.**

I. (*Natal Blue Grass*) A nutritious grass of the Sweet variety, growing in most districts of Rhodesia.

II. (*Unnamed*) A veld grass of the Sweet variety. It has a rich undergrowth : is full and straight : grows to a height of 3-4 feet : is fairly nutritious ; and,

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when green, is readily eaten by cattle. This grass would make very good hay, if mown in the flower-stage : but, mown in the seed-stage, it is innutritious.

III. (*Unnamed*) A bluish grass of the Sweet variety. It has serrated edges : is supple and of a fresh green colour, and not unlike Stink-grass in appearance.

IV. (*Timothy Grass*) One of the favourite grasses of the country, 2-4 feet high. The seed-heads are very rich and full : the undergrowth is short and sweet. Cattle thrive well upon it. This grass should be cultivated wherever it is possible in South Africa.

V. (*Unnamed*) This grass grows luxuriantly on old ant-heaps which have been turned over for cultivation by the natives. It is the Sweet grass to which I refer (on p. 261) as growing (apparently spontaneously) where the surface soil had been removed to build a dam, and (on pp. 261-62) where the top-soil had been removed to lay the new railway near Bloemfontein. It has short and very thick undergrowth ; and inclines to form a mat-like covering for the ground. I was not able to find any of this grass in the flower- or seed-stage ; and the fact of its being so readily eaten by animals, prevents its free growth into seed. I noted that, wherever stock could get at it, it was cropped to the very roots.

VI. (*Bastard Tambuki*) A grass of the Sweet variety. It has thick pale green undergrowth : throws out shoots on secondary stems at each point ; and grows to a height of 6 feet. It is fairly nutritious ; and practically forms the body of the veld grass of Rhodesia.

VII. (*Unnamed*) A grass of the Sweet variety. It has broad green blades, and very heavy seed-heads : is of a tall nature ; and grows luxuriantly in the bush-country. It is much liked by cattle : but not by horses and mules, who prefer a shorter grass.

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VIII. (*Unnamed*) A feather-head grass, Sweet and light, with spiky undergrowth.

IX. (*Unnamed*) Another feather-headed grass, Sweet, with a strong and full undergrowth, and several tufts in seed-head of a bunchy appearance.

X. (*Red-grass, or "Rooi-grass"*) Has a full fine undergrowth, and short light seed-heads : Sweet, and fairly nutritious all the year round : is readily eaten by cattle and horses. It occurs in a giant- and a dwarf-variety. The latter makes very good hay. It should be cultivated wherever the conditions permit.

XI. (*Assegai Grass*) A Sour grass ; of little use when it is permitted to grow from year to year without being mown, or, unless it is eaten-down by animals. When it is cropped low, cattle will eat it. Its most notable feature is the abundance of seed which it distributes in the dry weather, after the sheaves of barbed threads have been loosened.

XII. (*Stink Grass*) A Sour grass, of a bluish green colour, with serrated edges. It has a strong smell when crushed in the hand : turns red in dry weather ; and, when it is burned, its ashes are brick-red.

XIII. (*Unnamed*) A short grass of the Sour variety. It is rather uncommon in Rhodesia : but it covers large areas in the eastern parts of the Orange River Colony.

XIV. (*Unnamed*) A grass of the Sour variety. The stem resembles that of *Bastard Tambuki*. Has a thin spiky undergrowth.

XV. (*Unnamed*) A grass of the Sour variety. It has a thin hair-like undergrowth, and short thin seed stems.

XVI. (*Unnamed*) A short light innutritious grass, which grows on poor light soil.

XVII. (*Unnamed*) A very frail grass, with a delicate narrow undergrowth.

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XVIII. (*Unnamed*) Very similar to No. VI., but of a paler hue, and not so rigid.

XIX. (*Couch Grass*) Resembles the couch- or quitch-grass which is common in every country. It grows where other grasses will not grow ; and all animals will eat it readily. Like the other grasses, it is a weed in cultivated lands : but it is said to be an excellent milk-producer. It creeps along the surface very quickly ; not in the form of new plants springing from scattered seed but, in the form of new plants springing from new roots struck by old stems spreading on the soil. The agriculturist, who desires other crops, will find Couch-grass an ubiquitous and insidious foe.

XX. (*Unnamed*) Has a long seed-head, minute seed, and thin bloated undergrowth.

XXI. (*Unnamed*) Has a straw-like stem, and narrow long undergrowth.

XXII. (*Unnamed*) A long grass, similar to No. XVI. but stronger and larger in seed.

There apparently were many other varieties : but it was difficult to tell whether they were not of some of the species (which I have noted here) growing under different conditions.

## IV

No general system of agriculture or stock-farming has been adopted in Rhodesia as yet. Each farmer goes about his own business in his own way and at his own time.

**SYSTEM.**  
**Miscella-**  
**neous.**

The ploughing of the land is done chiefly by oxen

**Ploughing.**

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with a single-furrow plough known as the "75," or with the double-furrow plough called the "Flying Dutchman." A few two-furrow disc-ploughs and cut-away disc-harrows have been introduced lately. Oxen are slow but reliable in their work; and very inexpensive in their keep. They are useful for other purposes besides ploughing. They have been employed extensively in all transport-work. This was very remunerative before the advent of railways; and, even now, there is a vast amount of transport-riding to be done in the outlying districts. Most of the Rhodesian farmers were used to depend more on transport-riding than on the stock or produce of their farms. Cattle were bred primarily for the purpose of transport work, and secondarily for the market; and, when transport-work was at an ebb, wood (cut on the farms) was ridden to the mines or neighbouring towns for fuel. The farmer always could depend on these two items for ready money with little risk; and thus his attention was diverted from his farm and its real potentialities.

**Transport-riding.**

**Animals.** Oxen have become scarce, owing to the many diseases which of late years have ravaged the country. Mules and donkeys have been imported for transport-work: but their prices have been abnormally high during the last three years of military operations; and the farmers have been at a loss for motive power for their ploughing and transport-work. Consequently attention has turned toward steam.

**Machinery.** Single- and double-furrow ploughs have been discarded in some places for sets of steam-ganger ploughs. This implies a large outlay in farm-implements; and, considering that the country is only in the experimental stage, it is (to say the least) a very risky course. Although such implements have proved themselves to be useful and profitable in other countries, where hundreds of square miles present them-

## RHODESIA

selves for treatment, nevertheless they may be found unsuitable in Rhodesia, which totally differs in climate, surface, soil, and other essential conditions, from those countries for which modern farming implements have been devised. It must be remembered that the general experience of the South African farmer is that it is often a toss-up between a crop and a failure.

Principles, which are applicable to commerce, are not always applicable to agriculture. Machinery which increases the production and lessens the cost of such production, is an economical advantage to the commercial industry: because it is in continual use throughout the year. Consequently production becomes automatic; and profit can be counted to a nicety. The conditions of agriculture are altogether different. In agriculture, there works the law of "Diminishing Returns": which means that increase of labour does not increase produce to an equivalent degree. In manufacturing industries, there works the law of "Increasing Returns": which means that every increment of labour adds more than a proportionate increment of production.

An expensive plant like a steam-ploughing tackle costs some thousands of pounds by the time it is landed in South Africa. When it is set to work, it is required only for a short period of the year. The operations of agriculture are periodic, and not continuous. Implements, which can be used only during a few days or weeks, and afterwards are stored for eight or nine months, or left on the open veld (as the South African custom is), naturally are expected to pay interest on first cost during that short period. If an implement or machine (employed every day in the year) did its work at half the cost of another, no competitor could afford to employ the latter: but, if the former is only to be employed

**Some  
Principles.**

**Steam  
Ploughs.**

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during a short period of the year, it becomes a question whether the more primitive machine, which costs but a trifle, (and is quite as efficient), would not yield as much profit as the expensive modern one.

**Desultory  
conditions  
of agri-  
culture.**

The South African farmer either has to depend on very raw natives to handle his implements, or to pay white men at the rate of 15s. to 25s. a day and their rations. The Kaffir has no difficulty in learning to handle the orthodox implements. Work, which is done only now and then, is not so easily learned and is very easily forgotten. The Kaffir may be shewn how to use modern implements ; and perhaps he will learn to employ them for the short period to which they are appropriate. When the next year arrives, his memory will have become a blank : or he may have left the farm for some other and easier occupation. It is the desultory conditions of agriculture which add to the farmer's many difficulties.

**One experi-  
ence.**

It is said that, with primitive instruments the farmer cannot plough enough of his land during the ploughing season. This is one of the arguments used in favour of steam-ploughing tackle. Once in three years, the farmer perhaps may be sorry that he has not ploughed more ground : but the usual experience of the South African farmer, during two years out of three, is that he has ploughed too much. In this connection, I will narrate an incident. An English scientific farmer, who had established himself in the Orange River Colony just before the War, ploughed and cultivated (in the best and most expensive manner) a plot of five hundred acres of land. His neighbour, an old Boer of South African experience, treated a plot of ten acres, the work of six short days with a span of oxen. Both farmers sowed mealies : both crops made an excellent beginning. The Englishman privately dubbed the Boer a duller fathead than ever. And then, locusts laid both fields brown and



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bare ; and both crops hopelessly were lost. The Boer, in high glee, did not omit to make the Englishman aware that it is worse to lose five hundred than to lose ten acres of mealies.

The results, of the many new systems which now are being tried in South Africa, are extremely important, and deserve to be noted with care. There has been a boom in the agricultural-implement trade. Many of the newly imported implements undoubtedly will be of great assistance to the farmer. Nevertheless, one thing must be remembered. There are farmers, who were in South Africa before the War, who still are there, and who have not been too unprogressive to make a fair trial of many new-fangled implements. Very many of these last, which are only of recent importation, are cast-out now on the veld, and discarded in favour of the less expensive and more primitive implements of the country. This I saw.

**Results of  
experiments:**

Until the South African farmer has gained possession of a market, sufficient labour, and some certainty of fairly regular crops, he will be well advised to prefer experimenting with ordinary ploughs drawn by oxen, mules, or donkeys, rather than to waste his capital in steam-machinery.

**Steam plough  
vs.  
Ordinary  
plough.**

It will be argued that the diseases of Rhodesian cattle render them unavailable for the plough. If Rhodesia will get at the root of animal-diseases, there will be no lack of yokes of oxen for the plough, of droves of cattle, flocks of sheep, and troops of horses for her magnificent pastures. That is the problem which Rhodesia has to solve :—not steam-ploughing, but the prevention of disease ; and, about it, there need be no difficulty whatever.

**Rhodesia's  
problem.**

Let us take the case of a mine-owner whose gold-production is limited by the amount of labour at his disposal. Would he prefer a small and inexpensive but effective battery, which he could use advan-

**Argument  
continued.**

## SOUTH AFRICA

tageously and profitably all the year round? Or would he prefer an expensive battery which might do as much work in one month as the other could do in twelve months, but which (for want of labour and other conditions regulating the out-put of the mine) would have to lie idle for eleven months out of every twelve? I think that he would prefer the former certainty to the latter risk, the former continuity of operation to the latter waste of energy (and capital) by desultory operation. "Who goes slowly goes sanely; and he who goes sanely goes far," says the Italian adage.

**An opinion.**

**Other questions.**

**Labour.**

**Points for consideration.**

The South African farmer has to consider the questions of weeding and harvesting, of manuring his land in order to maintain its fertility. If steam power would do all these things for him, and render him independent of unreliable Kaffir labour, and provide him with favourable climatic conditions and a certain market for his produce, then, and only then, would its introduction become desirable. But it will do none of these things. A Matabeleland agriculturist told me of two brothers who farmed together in his vicinity. They could procure no labour for love or money for the gathering of their crops, some of which were being smothered in weeds, while the rest was rotting on the ground; and, unless the neighbours had gone to their assistance, their whole harvest would have been lost. This question of labour affects, and will affect, the farmer very seriously. The mines always will be competitors for the services of all available natives; and, as the nature of the gold-industry is of a very different character to that of the agricultural industry, the wages, which the former can pay, attract the Kaffir from the land to the mines.

The farmer who intends to embark in agriculture pure and simple in Rhodesia, ought to consider the following points:—

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1. Quality, price, position, of available land.
2. Cultivation of those crops only which will command an unfailing sale at remunerative prices at markets within reach.
3. Calculation of the yield of such crops, based on a seven years' average.
4. Cost of Production, (a) Implements (b) Labour.
5. Cost and possibility of obtaining manure for maintaining fertility of soil for successive crops.
6. Supply and quality of labour available.
7. Amount of capital at disposal, and amount of capital actually required fully to equip farm, and (if necessary) to tide over bad years while gaining familiarity with the peculiar natural drawbacks and conditions of the country.

An ideal system of agriculture is one where the fertility of the soil is annually maintained or increased, and where an average crop can be grown year after year without the purchase of artificial manure. Mr. Hull's system of farming on the Farm belonging to the Rhodes Trust in the Matoppos appeared to me to be sound and practical. Considering the short time he has been in occupation, he seems to have acquired a singularly thorough knowledge of the local, as well as the general, conditions of agriculture. Needless to say that some men seize saliences much more swiftly than others: it implies possession of a natural aptitude. Mr. Hull grasps the situation. He is content to acquire more knowledge from a series of elementary experiments. Patience is a virtue with him; and he makes no undue haste. He trusts in Providence: but he does not omit to do all that a man can do to help himself. I noted that he has a well-kept garden — a sure sign of a well-cultivated and well-managed farm, — 700–800 fruit-trees with

**Ideal system.**

**Concerning  
Mr. Hull.**

## SOUTH AFRICA

vegetables growing between them. The weeds were kept-down; and the garden-produce looked most promising. I was not disappointed by the way in which the farm itself was cultivated. The land was thoroughly well-ploughed to the depth which I consider to be most suitable for South African soils. Oat-hay, barley, mealies, and lucerne, formed the main crops. The cultivated lands lie around the homestead: hundreds of other acres were being levelled and prepared for cultivation. A vast amount of labour has been put into this farm. Water-furrows, with an aggregate length of thirty-five miles, have been made systematically to traverse the cultivated lands. Soil has been transferred from one situation to another. Some hundreds of tons of boulders have been removed: the land has been stumped and levelled. In fact, everything has been done which can be done, as it should be done. Lucerne, sown previous to my visit, in a plot of about twenty-four acres, was making fair progress. The Mealie-crop, which only had one shower of rain during the two months it had been in the ground, was a very promising crop. It was one of Cecil Rhodes' last acts to import the seed of this mealie-crop from Egypt. The dam, erected by Cecil Rhodes for the irrigation of this farm, is a great success. It was full of water when I saw it; and had the appearance of a huge lake. The cost of this dam must have been enormous; and I doubt whether it will be a financial success. But it was erected for the purpose of demonstrating what can be done in Rhodesia; and I have no doubt whatever but that it magnificently will serve as the object-lesson which the genius of Cecil Rhodes desired to offer to his eponymous country.

**The presence of Cecil Rhodes.**

**MANURE.** Manuring, and maintaining the fertility of the soil, is a matter deserving serious and systematic

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attention. An ancient custom of the Romans was to treat their lands with green manure. This custom still obtains in every country which ever owned the Roman sway. In Italy, they sow bean and vetch : in France, clover : in Germany, borage : in England, turnips, buckwheat, clover, rape, etc. The custom also travelled from England to North America, where they sow mealies. The crop is ploughed-in, to enrich the soil with additional vegetable matter. The value of such manure is of the highest order : for the nitrogen of the soil thereby is increased by the addition of the nitrogen which the crop has extracted from the air. In South Africa, the practice is to burn all vegetation which cannot be sold. By resorting to the old Roman method, the wholesale exhaustion of cereal-growing lands would be arrested.

**Green  
manure.**

**Roman  
custom.**

**Other  
customs.**

**South  
African  
custom.**

**An opinion.**

In such a climate as that of Rhodesia, the application of artificial manures (especially those manures which contain a high percentage of insoluble matter) is not always successful. The cost of such manures in South Africa is double that for which they are obtainable in England. Therefore, the Rhodesian farmer will find it greatly to his advantage to adopt the cheaper, and certainly not less effective, method of fertilizing his land with green manure, lime, admixture of soils, or kraal-manure. Should he, however, be unable to adopt any of these systems, and be compelled to purchase artificial manures, then I think that he would do well to purchase such manures exclusively on the unit system, i.e. buying on an analysis, and paying only for the actual amount of plant-food therein contained. To cart tons of worthless rubbish, for the sake of a small content % of plant-food, is unprofitable business to the farmer who does not need to add to his own burdens. A very low-grade super-phosphate, containing 10-14 lbs. of plant-food to the 100 lbs., is dear at any price

**Artificial  
manures.**

**An opinion.**

## SOUTH AFRICA

in South Africa. One pound of plant-food in a more concentrated form out-values a hundred-weight of ordinary artificial manure.

### V

**CROPS.** Wheat, oat-hay, barley, potatoes, are cultivated in small areas wherever English farmers have settled in Rhodesia. Such crops cannot be depended upon :  
**Irrigation necessary.** except under irrigation ; and it is a moot point whether irrigation can be made to pay.

In the future, irrigation schemes may prove to be practicable because profitable. The present low price of cereals, conjoined with the natural disadvantages of soil, etc., does not, in my opinion, encourage the belief that there is any immediate need for irrigation schemes in the country. If my view, of the market possibilities of South Africa and the results to be anticipated from foreign competition, is a sound view which shall be justified by the event, there is clearly no reason why Governments or Companies should expect profitable results from irrigation schemes. Two causes may operate in the future in favour of irrigation works in South Africa. The countries, which now produce cereals cheaply and abundantly, will increase their population to an extent which must make great inroads upon their capacity to export food supplies. Simultaneously the industrial population of South Africa must increase to a point at which local production of cereals will be profitable. But these are tendencies only ; and no argument for present action can be founded upon them. The great hope of the agriculturist

## RHODESIA

in South Africa must be centred in the development of the extraordinary mineral-wealth of the country. As the mineral-industries expand, agriculture will flourish increasingly near the towns. The advocate of irrigation, as a panacea for all agricultural evils in the country, might perchance render a very much more substantial service to the agriculturist of to-day and of the future, and to the country as a whole, by pressing forward the development of the mines and of the general mineral-wealth of the country. The expansion of industrial activity must tend materially and directly to the natural expansion of agriculture. Artificially to force agricultural development, in order to satisfy a certain political expediency, must result in the creation of a class of agricultural paupers which will prove a source of serious weakness to the Government of the future. Incidentally it may be mentioned here that a census, of mining employees on the Rand (taken before the War), gave a return of 97 % of British nationality. The prime necessity for agriculture, is to create market and a demand for agricultural produce. As that process makes headway, the demand for irrigation schemes may arise and will be justified by the hard logic of events.

The natives cultivate large areas of mealies (maize) and millet, which they call "munga." This latter crop has the advantage of immunity against the attentions of locusts. Kaffir corn (mabele) is the chief grain grown by the Matabeles : they use it chiefly in the form of porridge and a species of beer. Poko, the favourite grain of the Mashonas, is raised in large quantities : but it seldom is seen in any other portion of South Africa. It grows in all situations, and in almost any kind of soil ; and produces a small seed which is highly nutritious and much appreciated by the Mashonas. It is grown from seed : but the trans-

**Grain.**

## SOUTH AFRICA

**Coffee.** plantation of its stalks will serve the same purpose. It is said that coffee cannot be grown at a lower altitude than 3,000 feet. **Rice.** Rice flourishes in some of the swamps. **Pea-nut.** The Pea-nut or monkey-nut, an underground plant, is grown extensively by the natives: who extract its oil, and also make beer with it.

**Rubber.** The India-rubber Creeper is a native of Rhodesia, and a great source of income to the niggers. The North-west Province is noted for rubber, in which the natives do a great trade. The growth, preparation, and disposal, of this increasingly important commodity may be witnessed in nearly every district. It is known, on the London Market, as "Loanda Nigger Rubber"; and finds a ready sale at 2s. 6d. to 3s. 6d. a lb. A certain Portuguese had a store at Kalomo a little while ago, which was overflowing with rubber representing a bulk of 3,000 loads, each load having a local value of £8. The rubber-industry only needs scientific development, and it will become a source of great wealth to the province. At present it sadly needs protection from wanton damage done by natives who dig-up roots in the most merciless manner, selecting the best roots, and leaving the undeveloped roots to wither on the surface. The Government will do well to protect, encourage, and develop this industry, whereby both settlers and natives cannot fail to be benefited. I have been led to this conclusion by perusal of Major Colin Harding's very interesting report to the BRITISH SOUTH AFRICA COMPANY, to which document I am indebted for some of the facts here cited.

**Cotton.** Cotton grows wild. In 1902, a serious attempt was made to grow cotton on the Borrowdale farm. The plants were in a healthy and very vigorous condition, when I saw them in April. The crop appeared to promise well. The land had been well-cultivated.



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The manager, a thoroughly practical agriculturist from Scotland, had done his part admirably. Then came an early frost which damaged the whole crop. It had been anticipated, more or less, because an attempt had been made to obtain the seed for planting a month or two earlier. The experiment, however, is most valuable, in that it proves the fact that good cotton can be grown at the proper time. The next stage in the experiment is to find out the precisely right time for planting, so as to conclude the harvest before the arrival of the frost. I am of opinion that there will be a great future for the cotton industry in Rhodesia, provided that labour be plentiful and cheap. This industry is eminently suitable for the employment of native women and children.

**Valuable  
experiment.**

The wild Castor-oil plant is the most luxuriant and prolific weed-shrub in Rhodesia. It grows in almost any soil, and yields a large quantity of berries. It is valuable as an oil-plant, and as a deadly poison to locusts.

**Castor-oil  
plant.**

## VI

Africa is known to produce the largest and strongest forms of terrestrial animal-life. The indigenous animals, the lion, elephant, hippopotamus, rhinocerus, giraffe, antelope, etc. of Africa are unequalled by the quadrupeds of any other country.

**LIVE  
STOCK.  
Ex-Africa  
alliquid  
semper—  
ingentis-  
simi.**

The domestic animals, cattle, sheep, horses, goats, pigs, are not natives of Africa. Animals have a greater power of adaptability to climatic and other conditions than plants. Most, if not all, of the domestic animals of Rhodesia have been imported at one time

**Domestic  
animals.**

## SOUTH AFRICA

or another ; and many of the older breeds of cattle, sheep, and goats, by this time provide characteristic instances of natural adaptation to environment. They now may be said to thrive in South Africa, because they are in natural harmony with the surroundings from which their sustenance is drawn. The Afrikaner, the Angoni, and the Mashona cattle, are the inevitable product of the rigorous operation of natural laws. They thrive on whatever nourishment the veld offers. Rhodesian farmers informed me that cattle grow all the year round in ordinary seasons.

**Importation  
not recom-  
mended.**

The importation into Rhodesia of highly bred and highly fed cattle is not to be recommended, except (perhaps) for cross-breeding. They hardly can be expected to thrive under such uncongenial conditions : nor can their progeny (for one, two, or even three generations) be reared successfully unless winter-forage and shelter be provided for them. In England they have been well-fed, well-sheltered (not to say pampered) by the proud owner of such valuable stock. On their arrival in Rhodesia, they have to forage for themselves in summer and winter alike : at night, they are huddled-together in an open kraal up to their hocks in filth. Herakles does not practise with Zambesi or Limpopo, as formerly with Alpheios and Peneios. The Aygeian kraals of South Africa never are cleaned-out ; and they may be stigmatised as hotbeds and forcing houses of disease. English shorthorns, suddenly transferred to a place of such totally different conditions, naturally suffer for generations. And no wonder ! “ Nature is a school-mistress, teaching without spelling-books. As the teacher teaches, so the scholar learns.”

**An opinion.**

For the foundation of a Rhodesian breed of cattle, the Afrikaner (for a large breed) and the Angoni or Mashonas (for a small breed) are eminently suit-

## RHODESIA

able. They have in them that which cannot be imported, and yet that which is absolutely necessary in cattle which are to be reared with success under the peculiar conditions existent in South Africa, viz., the indigenous Nature. The Angoni and Mashona cattle seemed to me to have been stunted symmetrically by natural conditions, in order that they might thrive better on the pabulum offered by the veld.

The geological study of Rhodesia is important to the stock-farmer. I noted throughout South Africa, that similarity of geological formation existed side by side with similarity of breed in cattle and similarity of physique in the native. Rhodesia has large areas of feldspathic land. The small breeds of cattle, such as the Angoni and Mashona, are the produce of such soil; and the Mashona native is a weed compared with specimens of tribes existing on different soil and formation. The small breeds of native cattle are more suitable for granite-soils than the larger breeds. The latter are liable (on granite-soil) to become affected by rickets or paralysis, by reason of the lack of phosphates. I often noted the small breed and the large breed of cattle grazing together on granite-soil. The former were generally in prime condition: the latter were in poor condition. In other districts, I often saw similar breeds of cattle grazing on calcareous soils. They both exhibited stronger bone, more massive body, relatively shorter limbs, and infinitely better general condition than the specimens of the same reared on the feldspathic veld.

The small breed of cattle is more suited to Rhodesian conditions, except where winter-fodder and shelter are provided. Under the latter circumstances, the large breeds probably would be the best in every way. Cattle and goats, do extremely well in Southern Rhodesia and in the Loanga district and on the Tanganyika plateau. Most of the cattle in the latter

**Stock-farmers should study geology.**

**Small cattle far granite.**

**Large cattle for calcareous soils.**

**An opinion.**

**Animals.**

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districts are of the Angoni breed. They thrive well ; and they so far have been free from disease. Nutritious herbage grows plentifully in the valleys and *vleis*. Horses, mules, donkeys, do better here than in most parts of Rhodesia. They are well-housed, and well-cared-for in every way. The Loangwa and Tanganyika districts are the only districts where horses have been kept ; and, up to a short time ago, no case of horse-sickness has been reported. The cost of keep and care of horses here is merely nominal. Grain is plentiful ; and bamboo-leaves (of which horses are extremely fond) take the place of forage.

**Goats and  
sheep.**

Goats and Fat-tailed sheep thrive in many districts. It is, however, highly necessary that the intending goat- or sheep-farmer should make a very careful study of local conditions before adventuring his capital. An amusing but ominous incident was narrated to me by a Rhodesian land-owner who, at the request of his tenants living in a place called Filabusi in Rhodesia, bought a tribe of goats. There had been no goats in the district before this. Soon after their arrival they began promptly and inexplicably to die one after another, until the whole tribe was gone. The astounded farmer asked some of the natives whether they knew why the goats had died. "Well, Baas," was the intelligent response, "the name of this place is Filabusi, which signifies in English 'Deadgoat' ; and naturally no goats have been able to live here !"

**An anecdote.**

There undoubtedly are certain districts in Rhodesia where goats and Afrikander sheep should thrive extremely well : but, until the tall grass has been eaten-down regularly for some years by cattle, sheep-farming (except in the few favoured districts) hardly can be expected to make much progress. The Highlands of Rhodesia will some day be suitable for sheep : but that day is not yet.

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Few districts of Rhodesia are suitable for horses. Horse-sickness is very virulent during three or four months in every year. If a remedy could be found for this malady, ("a consummation devoutly to be wished"), Rhodesia would become a favourable horse-breeding country. The grasses and the climate are most suitable: but, as long as pest is paramount it is not advisable to have any horses in the country, unless they themselves are salted or their owner is prepared to stable them during the fever-season.

**HORSES.**  
**Diseases**  
**prevalent.**

**Grass and**  
**climate are**  
**most suit-**  
**able.**

Donkeys are getting into favour with farmers and transport-riders, owing chiefly to the fact that they are immune against horse-sickness and nearly all other diseases. The present price of donkeys is extremely high: but, even at one third of the present price, donkey-farming could be made to pay handsomely in Rhodesia—where a block of suitable land can be obtained at a nominal price.

**Donkeys.**

Mules are subject to horse-sickness, though they are not so susceptible as horses. They are very useful animals for transport: but the ox so far is the most useful animal for transport- and farm-work in Rhodesia.

**Mules.**

Ostrich-farmers should do well in Rhodesia, where the birds run-about wild. At the time of my visit, I came across a pair of wild ostriches with thirteen young ones.

**Ostriches.**

The reason why North-eastern Rhodesia is free from animal-diseases, while Southern Rhodesia is infested by Redwater and Lung-sickness, is contained in the one and only method of eliminating all animal-diseases from South Africa:—viz. isolation and proper precaution. The healthy area of North-eastern Rhodesia has, between it and Southern Rhodesia, the effectual barrier of R. Zambesi. Cattle, from the North, are permitted to go to the South:

**N.E. Province**  
**free**  
**from Animal**  
**diseases.**

**Reasons.**

## SOUTH AFRICA

but the authorities most sagaciously have prohibited cattle from crossing from South to North.

Major Coryndon, the Administrator of North-western Rhodesia, told me that cattle, donkeys, dogs, are not permitted to cross R. Zambesi from the south : (because their long hair is liable to harbour ticks, which are credited with being the means of conveying almost all diseases) : while horses and mules are submitted to stringent examination, before they are permitted to cross the river. Hence and hence only, i.e. by the fact of its splendid natural isolation, and by practical precautionary measures, are the northern provinces of Rhodesia today, free from animal-disease.

**The Tsetse  
Fly.**

The Tsetse fly infests a few areas on the upper and middle courses of the R. Umgusi : some parts adjacent to some of the eastern districts : and, to some extent, R. Majili : the vicinity of R. Kafue and its sources. Three years ago, the whole neighbourhood of the lower Gwai River on the southern bank of R. Zambesi was infested thickly by this noxious pest, as were also some patches along the various points of both banks of R. Zambesi below the Falls : but in consequence of the rinderpest, which carried off all the buffalo, the tsetse-fly gradually has been disappearing.

**Other pests.**

Cattle suffer from attacks of the Scormji, or red soldier-ant. Horse-sickness prevails in most districts : but the higher parts of the Batoka plateau are considered to be fairly free from it. Owing to stringent regulations, the country has so far escaped the disease known as redwater, which has caused such loss to the cattle-owners of Southern Rhodesia.

## RHODESIA

### VII

Farms vary in size, position, price, and fertility. Matabeleland farms average 3,000 morgen, or a little over 6,000 acres. Mashonaland farms average 1,500 morgen, or a little over 3,000 acres. Some hundreds of farms have been allotted by the BRITISH SOUTH AFRICA COMPANY to Land Companies, who hold them in blocks in conjunction with mining and other rights. Some of these companies farm portions of their estates: others let farms to tenants: but most of the farms at present are unoccupied, by reason of the scarcity of tenants. Many farms were granted by the Government to the early pioneers. Every man, who did military service at the time of the Occupation, was entitled to a farm of 3,000 morgen in Matabeleland or of 1,500 morgen in Mashonaland. Some of these pioneers promptly sold their farms to land-companies, or to individuals; and betook themselves elsewhere. Others settled on their land; and are still there. Finally, many farms were leased or sold, by Government or by the land-companies, to newcomers. All these farms were granted under various titles. They are now held subject to quit-rents, which vary according to the different titles. Singly or collectively, these farms are available for newcomers. Their prices are most tempting, in comparison with those which rule in other parts of South Africa, as may be seen from the following table:—

**Farms.**

	per acre.
Cape Colony, average price of land . . .	33/-
Orange River Colony, " " " . . .	34/4
Natal, " " " . . .	25/-
Transvaal, " " " . . .	28/6
Rhodesia, " " " . . .	2/1

(*Cf. chapter on LAND TENURE AND LAND VALUES.*)

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The Rhodesian Government has innumerable farms ; and some of them may be classed as the best land in South Africa. The Rhodesian land-companies as well as private owners, have also numerous farms on sale or lease at nominal rates.

**Room for all.**

At the close of the South African Campaign, and until quite recently, "Land-Hunger" was a very general mania in the Transvaal and Orange River Colony. It never affected Rhodesia. Land and farms, there, were (and now are) as a "drug in the

**Reasons.**

market." The place is so vast and so new : the settlers at present are so few. Elsewhere, wild speculation set-in on the strength of an expected rush into the country after the War. It became known that the new Governments were buying as much land as they could get at any price for purposes of land-settlement. This gave an additional spurt to prices. Further, there was the off-chance of finding precious minerals ; and, failing the actual finds, there always was a golden opportunity of fooling the public regarding the metalliferous possibilities of South Africa. Several "wild-cat schemes" were palmed-off successfully. Transvaal farms became fashionable and profitable counters in the hands of professional gamblers. Where Nature had not marked the difference between the Transvaal, Rhodesia, and Natal, a wire fence served to denote the boundaries of these states ; and sufficed to mark a difference of hundreds and thousands of pounds in the value of farms within or without their limits.

**Rhodesia  
not fashion-  
able.**

But Rhodesia was moved by none of these things. She was not fashionable ; and, therefore, she was neglected by the gamblers and the speculators. Some Rhodesians felt themselves left out in the cold. The more headstrong of them dashed-off towards what they fancied was an Eldorado. Many sold their farms, in feverish haste to join the scramble in the



## RHODESIA

Transvaal. Others pined to follow : but failed to realize their property.

In 1896, Rinderpest swept away 95% of Rhodesia's cattle. Then came the native rebellion. It was followed by the Boer War, in which many of Rhodesia's bravest sons fought, and lost their lives for England. After that, ensued the gambling fever just described. And, finally the Red-water Plague has been playing havoc with Southern Rhodesia's cattle.

**Rhodesia's  
past draw-  
backs.**

These events account for the present low price of land in Rhodesia. There has been, as it were, an ebb-tide in her history ; and it still is an ebb-tide. But the intermittent tendency of Nature will preclude its long duration. Even now it requires no very extraordinary foresight to see that a great change is at hand ; and that such change can be only for the better, and for perpetuity. Meanwhile it behoves Rhodesia to make her preparations, and to set her house in order. Her Administrators ought to realize what an asset it has in 750,000 sq. miles of land ; and seriously to consider the best method of developing the country for farmers on sound and scientific principles. If this is done, and done now, Rhodesia will become peopled by a superior class of farmers, owning stock which will redound to the credit of South Africa.

**A change at  
hand.**

**The duty of  
the Adminis-  
tration.**

On the other hand, if the Government continues to legislate on lines which are purely "parochial," continues (for example) to tinker with Innoculation as a remedy for all the diseases which are the scorpion-scourges of Rhodesia, instead of attacking their root, the major part of the country will remain desolate, and its sparse population dissatisfied. Things being as they are, and no guarantee forthcoming that authority will do as other authorities successfully have done, and stamp out once and for all the animal-diseases, which have wreaked such devastation in the past (and which are in the power of men to eradi-

**The alterna-  
tive.**

## SOUTH AFRICA

cate), it would not be wise for any English farmer to invest his capital in stock-farming in Rhodesia.

**Eradication  
of animal-  
diseases  
imperatively  
essential.**

However, when there be signs of the Rhodesian Administration joining with the other governments to devise a scheme—collaboration of all South African Governments being absolutely necessary—for a practical and effectual and radical morbidicide, then Rhodesia may be designated as the best and most desirable stock-country in all South Africa. As to the nature and scope of the scheme which I have adumbrated here, I have ventured to set down a few suggestions in the chapter on *Diseases of Animals*.

## VIII

**Difficulty.**

**Each case  
must be  
judged  
alone.**

It is a difficult matter to deduce universal principles, for the guidance of the agriculturist and pastor, from the few particulars which I collected and the few experiments which I conducted in connection with the soil of Rhodesia. The fact is that the nature and the relative position of the various soils are so diverse, that each case ought to be examined and determined by itself. This is not a task for one man. No country in the world has been so belauded by the theoretical pamphleteer, the incompetent patriot, and the irresponsible journalist, as the King's Dominion of South Africa. And no class of men have been more wholesalely condemned, more unwarrantably maligned than the farmers of South Africa. In order to arrive at an understanding of the truth, the four sources of error must be avoided. They are (a) the systematizing spirit which pervades all classes, (b) individual idiosyncracies, (c) the strange power of

**Four sources  
of error.**

## RHODESIA

words and phrases over the mind, and (d) the traditions of the past. The subject must be approached, and its particulars examined with a perfectly open mind.

Rhodesia is a new country, not much more than ten years old. Before its occupation by the English, it was a native wilderness. In ten years, wonderful progress in civilization has been made. The mining industry has been exploited and developed. Railways, roads, and towns have been erected. Agriculture and stock-farming have been begun; but are still in their infancy. Though few in number, the farmers of Rhodesia have shown excellent spirit, grit, in most disheartening circumstances; and have overcome many preliminary difficulties which, at first, appeared to be insurmountable. Rhodesia now has arrived at that stage when it becomes necessary to interrogate Nature as to Her secrets. To put Nature to the question, concerning Her secret methods, means a series of experiments which are often long and always costly. But, there is no other way; and the results are infallible and of value inestimable. Ten years of a farmer's life is but a short time for experimenting with land. Since the Occupation ten years ago, numerous obstacles forced themselves upon the farmers, causing experiments to be abandoned after much trouble and expense had been incurred. Many deductions, drawn from such incomplete experiments, have proved invalid in the light of subsequent more leisureed investigations. Careless observation (in the field) resulted in erroneous conclusions (in the study). My examination of the problem taught me that the experiments which have been made, were not made by experts, nor with sufficient accuracy and finality; and, therefore, I cannot adopt them as the basis of my reasoning.

It is absolutely necessary that experiments should

**A new  
country.**

**Nature must  
be interro-  
gated.**

## SOUTH AFRICA

**Conditions  
of experi-  
ments.**

be made on Rhodesian land, in order to establish once for all the possibilities as well as the impossibilities of this vast dominion. These experiments must be made by the beneficence of some real philanthropist, or (as a matter of plain duty) by the Government of Rhodesia: but they must be made. It is not easy at present to estimate the financial value of such experiments. A large proportion of the work naturally will give negative results. Yet even these will have practical value: for they will shew the farmers of Rhodesia the things which ought to be left undone; and that often is quite as important a lesson as the truth about the things which ought to be done. There are so many peculiarities of the soil, so many appropriate ways of cultivating it, so many different soils, manures, seeds, implements, times, seasons, natural conditions, to be considered. Even the most scientific agriculturist, aided by all the local experience available, is bound to be perplexed by the attempt to cultivate the soil of Rhodesia. Hitherto, erroneous opinions have led to gravely erroneous practice. But, armed with a thorough knowledge of conditions, agriculture and stock-farming should not only be possible but profitable to the English settler. And such knowledge can be obtained only from true records of the results of scientific experiments.

## IX

**sources of  
wealth.**

Rhodesia's three great natural sources of wealth are :—

## RHODESIA

(a) Minerals :

(b) Cotton, rubber, tobacco, vegetable-fibre and  
-oils, sugar, tea, coffee :

(c) Pasturage.

The mineral industry for the present must be placed before the farming industry. Rhodesia is an inland country, possessing no natural means of transport, no navigable rivers, no harbour or sea-board. There is only about one white man to every 80 or 90 sq. miles of terrain. The natives create no demand for farm-produce, being quite able to provide the same for themselves. Consequently, if Rhodesia is to be primarily a farming country, she must seek her market beyond her own frontiers. And that she is not yet ready to do.

**Minerals.**

It is impossible to conceive of a company, (possessed of any pretensions to knowledge of commercial principles) building railways of the enormous mileage of 2,000 miles, across a country which has only 8,000-9,000 white inhabitants, with the hope that agriculture would flourish sufficiently to enable such a railway to roll its rolling-stock and pay a dividend. I doubt that a single mile of railway would have been built in Rhodesia, but for the mines and those that have their pleasure (and work) therein. For these reasons, I do not hesitate to give the mineral industries the premier place. And I affirm that the man, or men, who develop the said mineral industries, will do more for the agricultural and pastoral industries than any scheme which any government possibly can put-forward. The miner and the farmer are interdependent. Neither can exist alone : both must benefit together : but it is on the shoulders of the former that the latter can climb to affluence. The two industries go hand in hand : but the miner must lead, at least until the country can boast of a considerable white population. Then, the farming

**Railways  
laid for  
minerals.**

## SOUTH AFRICA

industry, if it be carried on by scientific and energetic methods, will become the backbone of the country : because it will be the only naturally permanent industry.

**Facts and figures.**

In regard to minerals, I base my faith on facts and figures : these being the only means by which one who is not a mineralogist can arrive at an opinion. I may be told that "figures are misleading." The figures, on which I build my argument, happen to be authoritative ; and they represent the actual monthly output of the gold-mines of Rhodesia. They shew an increase from month to month from the very start of mining operations, as follows :—

1898	.	.	.	.	ounces	24,555
1899	.	.	.	.	"	65,203
1900	.	.	.	.	"	91,940
1901	.	.	.	.	"	172,061
1902	.	.	.	.	"	194,268
1903	.	.	.	.	"	231,872

They may be seen in the **BRITISH SOUTH AFRICA COMPANY'S Reports**, together with the favourable opinion of experts on the illimitable stores of copper, iron, and coal, which are waiting to be developed in Rhodesia.

**Cotton.** In addition to the value which is placed upon Rhodesian cotton as a fibre-plant, its very great value as an agricultural crop must not be forgotten.

**No waste.** It has this signal advantage, that no part of it is waste. All the cotton-plant and seed profitably can be used. The oil produced from the cotton-seed always will find a ready market. Meal made from the residue is, not only a valuable food for stock but also, one of the most useful fertilizers for the land.

**Residue for stock.** In England, cattle fed on cotton-cake pay for the cake itself ; and the return in manureal value is considered equal to two-thirds of its feeding value. The residue of cotton is the one thing needful for the

**Value of cotton-manure.**

## RHODESIA

South African stock-farmer. Severe drought, poor quantity of grass and inclement weather during three months of each year, often cause him to lose many sheep and cattle through want of extra food. This never need happen, when the uses of cotton are realized. And, in Rhodesia, cotton grows wild. But I will go further. A ton of cotton fibre, at 7*d.* a pound, represents a value of £65 6*s.* 8*d.* Let this be compared with the value of a ton of mealies at 10*s.* to 15*s.* a bag of 180 lbs., which (at the very most) is £5 10*s.* to £6. The railway-rate (for cotton and mealies) which is based on weight, would be equal.

Value of  
cotton as  
export.

Impartial justice demands the expression of an opinion concerning Rhodesia's promising pasturage ; and I am bound to state that the price at which it can be acquired, and its pre-eminent suitability for stock-raising, give Rhodesian pasturage the first place in South Africa. I have examined the grasses of Rhodesia, the stock which grazes on these grasses, and the circumstances attending the practice of stock-raising. These leave no doubt in my mind as to the indisputable supremacy of Rhodesia as a stock-raising country ; and, on this account, I place pasturage among her three great natural resources.

Pasturage.

## X

I should like to support the opinions, which I have expressed, by reference to those of men whose views are entitled to every consideration. Professor Bryce, in his work called *Impressions of South Africa*, says :—

Opinions  
corrobo-  
rated.

“ Regarding the pastoral and agricultural capabilities of the country there need be little doubt. All of it, except

By Pro-  
fessor Bryce.

## SOUTH AFRICA

" those lower grounds to the north and south-east which are  
" infected by the tsetse-fly, is fit for cattle. Some parts, such  
" as the Matoppos Hill in Matabeleland and still more the  
" Inyanga Plateau in Mashonaland, offer excellent pasture.  
" The high Veld of Central Matabeleland is no less available  
" for sheep. The quality of the soil, for purpose of tillage,  
" has been tested by Europeans in a few places only. Much  
" of it is dry ; much of it, especially when the subjacent soil  
" is granite, is thin or sandy. Still, after allowing for these  
" poorer tracts, there remains an immense area of land which  
" is fit to raise cereals, and some tropical crops such as cotton.  
" The immediate question is not therefore as to the productive  
" capacities of the country, but as to the existence of a market  
" for products themselves."

**By Mr.  
Selous.**

Mr. F. C. Selous, than whom there is no greater authority on South Africa, says :—

" Fifty years ago, this fine country (Mashonaland) must  
" have been thickly inhabited, as almost every valley has at  
" one time or another been under cultivation. On the summit  
" of every hill may be found the walls, in a more or less perfect  
" state of preservation, of what I think must have been  
" cattle kraals. The peaceful people inhabiting this part of  
" Africa must then have been in the zenith of their prosperity.  
" Herds of small but beautiful cattle lowed in every valley ;  
" and their rich and fertile country doubtless afforded them  
" abundance of vegetable food."

In another place Mr. Selous remarks as to the climate :—

" As good a one as any man has a right to expect in this  
" troublesome world."

**By Mr.  
Maund.**

Mr. Maund says :—

" Matabeleland is probably the most healthy part of South  
" Africa ; and its agricultural capabilities are surpassed by  
" none. The soil is very rich ; and there is plenty of water  
" in running streams that abound."

**By Mr. E. H.  
Garthwaite.**

In regard to minerals, Mr. E. H. Garthwaite says :—

" The results already obtained from the producing pro-  
" perties show conclusively that Rhodesia is bound to forge  
" ahead as soon as the numerous temporary draw-backs under  
" which it is struggling at present are removed. The gradually



## RHODESIA

"increasing yield of gold has not been in proportion to what it would have been had it been possible to give each party its quota of natives and to have forwarded the machinery which has been waiting so long at the coast.

"The various districts — despite the difficulties of the past two years — are going ahead with their development work, with the result that before long Rhodesia will have a much larger representation of producing mines; and while not every prospect will become a paying property, still the percentage of successful mines will probably compare favourably with that of any other quartz gold mining country in the world."

## XI

In view of these favourable testimonials, it may be asked why Rhodesia should be so much behind the other South African Colonies in the matters of population, agriculture, stock-farming, and mining industries. At the risk of repetition, I submit the following points in response to such a query.

**Reasons for Rhodesia's backwardness.**

1. Rhodesia was occupied by white men for the first time only about ten years ago.

**Infancy.**

2. It then was the farthest colony from the area of civilisation: with which, as with the coast, it had no communication by railway or water.

**Lack of transport.**

3. Rinderpest slew 50% - 95% of the stock in 1896.

**Rinderpest, 1896.**

4. In 1896 also, the natives rose in rebellion, compelling all the white men to seek safety in the towns. The latter suffered the total destruction of their property, houses, stock, etc., by the barbarians.

**Native rebellion, 1896.**

5. In 1899, when the country was recovering from the two previous disasters, the Great Boer War broke out. Very many Rhodesians offered their

**War, 1899.**

## SOUTH AFRICA

services to the Imperial Government; and, thus, both the country-districts and the towns again became depleted.

**Redwater.** 6. During the said War (which lasted nearly three years), a most virulent disease (commonly called Redwater but since diagnosed by Dr. Koch as African Coast-fever) scourged Rhodesia, doing great havoc among the cattle. Thus, the stock-farmers, and all who depended in any way on ox-transport, were thrown-back once more.

**Boom in other colonies.** 7. It was hoped that Rhodesia would share the prosperity experienced by the other colonies after the Peace of 1902. But she was disappointed. The artificial booming and over-estimation, of every conceivable kind of property in the new colonies, did not extend to Rhodesia. Consequently, on finding their country left out in the cold, many Rhodesians went to try to share in the boom and expectations of the Transvaal and the Orange River Colony; and thus, for the fifth time, Rhodesia became weakened.

**General depression.** 8. Mining naturally is the most important industry in Rhodesia. It attracts all the capital and energy of her leading men, and also of the administrators of the country. Without the mining industries, farming could not be possible. The mining industry of Rhodesia at present suffers, as similar industries are suffering throughout the world, from the general depression. Therefore, farming in Rhodesia suffers in its turn. It must be remembered that Rhodesia possesses a native population of her own, which is quite adequate to the needs of her mining and her farming industries. But the great demand of the Rand for native labour has been very detrimental to Rhodesia: every means having been used in order to induce Rhodesian natives to go into the Transvaal. Cape Colony, the Orange River Colony, and Natal, derive great benefit from the Transvaal; and their complete severance from

**Effect of Rand competition for labour.**

## RHODESIA

her would place them in an extremely awkward position. The contrary is the case with Rhodesia. If she could be removed a few thousand miles from the Transvaal, it would be to her very great advantage.

9. There is another reason why farming has not made the progress, which reasonably might have been expected of it in a country where the natural circumstances are so favourable. It is that Rhodesia's leading officials are mining and administrative, and they do not possess equal efficiency in regard to the agricultural and pastoral industries.

At the time of my visit, the Agricultural Department was a subsection of some other department. It certainly could boast of a very able Veterinary Officer in Mr. Gray: but his powers were limited by the ignorance of others; and, therefore, his abilities were annulled. I will mention Mr. Edmonds also as a thoroughly capable officer: but the staff of stock-inspectors (whose efficiency ought to be indubitable in a country afflicted by so many diseases) seemed to have been recruited from that class of men who never have, and never will have, any practical knowledge of stock. I heard of one of these officials, who, in the course of his duty, took occasion to examine a pen of sheep which the Government had purchased. He opened the mouth of a sheep for the purpose of inspecting its teeth; and incontinently exclaimed that it had no front teeth in its upper jaw! Proceeding to the others, he found them all to be in a similar predicament; and he was on the point of rejecting them, when some one (who had seen sheep before) informed him that Nature had formed the whole race of *Ovis aries* without incisors on the premaxillary bone.

I intend the foregoing remarks as a serious and deliberate condemnation of the Agricultural Department.

**Official neglect of agriculture and pasturage.**

**Mr. Gray (Veterinary Officer) hindered.**

**Mr. Edmonds.**

**Incapable Stock-Inspectors.**

**Agricultural Department condemned.**

## SOUTH AFRICA

ment of Rhodesia as it was at the time of my visit ; and I will proceed to substantiate my opinion.

*Rhodesian Times.*

The *Rhodesian Times* for April 26th, 1902, gives an account of a largely-attended public meeting of farmers and others, at which the following resolution was carried :—

“ That this meeting of representative cattle-owners in Mashonaland most earnestly beg the Government to procure expert opinion from South Africa to co-operate with Mr. Gray (veterinary officer of Rhodesia) in investigating and dealing with the present epidemic so disastrous to cattle-owners and farmers in this district. Furthermore, it is our firm opinion that delay in dealing with this matter will be disastrous to the general community.”

*Disastrous  
dilemmas.*

Events proved these farmers' “ firm opinion ” to be only too well founded. Delay did prove “ disastrous to the general community.” Here was information publicly given and in no uncertain voice. In England, and in all countries which are run on practical common-sense principles, farmers are penalized with heavy fines if they do not give instant information to the proper authorities of an outbreak of infectious or contagious disease, to the end that infected stock may be confined to isolated areas.

*Bulawayo Chronicle.*

A few days later, the Landowners' and Farmers' Association passed the following resolution, which I extract from the *Bulawayo Chronicle* of May 3rd, 1902 :—

“ In view of the present cattle sickness having been in Mashonaland for the last two seasons, and whereas the head of the Agricultural Department during that time took no decided measures effectually to stop the spread of the disease, and as even now there appears to be some doubt in the minds of the Department as to its actual nature, this Association has unanimously decided to request the Government to separate the Agricultural and Lands Departments, and appoint at the head of the former a qualified man, who would be able to devote his whole time and attention to the agricultural interests of the country, and who would keep himself in touch with the requirements of the farming industry.”

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According to the *Rhodesian Times* of May 24th, 1902, a resolution, in identical terms with the above was passed by the Mashonaland Farmers' Association. Mr. Edmunds, speaking at this meeting, said :—

**Farmers' Association.**

" They had two great scourges — rinderpest, and the present disease. Did any man believe that, in the former instance, effective measures had been taken to prevent the spread of rinderpest? He believed that one practical man at that time could have done more to stop its spread than the efforts of the whole Agricultural Department. Had the provisions of the Cattle Disease Act been promptly put in force, many of them would have been in a better position today. Had they ever heard any complaints against the Heads of the Mining Department? (Voices, 'No, no.')."

Another resolution moved at this Meeting was to the following effect :—

" We unanimously consider that the local Government authorities (Agricultural Department) are directly responsible for the heavy losses incurred by settlers."

Mr. McArthur, at a public meeting of stock-owners, said :—

**Mr. McArthur.**

" It is an open secret that both Mr. Orpen (Head of the Agricultural Department) and Mr. Gray (Veterinary Officer) have expressed the opinion that the disease was Redwater, that it was bound to go through the country, and that the sooner it did so the better."

Colonel Raleigh Grey sent a letter to the head of the Agricultural Department containing these words :—

**Colonel Grey.**

" If you are correct in saying that temporary legislation cannot be obtained in this country"—(*he was referring to prosecution of natives, who were spreading Redwater throughout the land by carrying about diseased meat*)—" I repeat that the present system is a relic of barbarism, and unworthy of modern principles which have characterised the making of Rhodesia."

I readily admit that (because the country is unfenced from one end to the other) the difficulty, which the Agricultural Department would have had to

**Difficulties admitted.**

## SOUTH AFRICA

**Mr. Orpen's  
own report**

encounter (in its unmade effort to control and isolate infected areas and infected cattle) would have been very great. But it would not have been impossible. It would not even have been more great than a previous effort which proved entirely successful. In a Report by Mr. Orpen (Chief of the Agricultural Department) I find that he already had prevented rinderpest from spreading into Southern Rhodesia from the Transvaal. He says <sup>(1)</sup> :—

“ Imports of stock from the disturbed border were hindered  
“ and prevented by military exigencies with regard to railways ;  
“ and were at last altogether stopped by the outbreaks of  
“ rinderpest, which made it temporarily impossible to pro-  
“ hibit all importation from the south. For this purpose a  
“ cordon was established all along the southern and south-  
“ eastern border of Rhodesia, which no stock was allowed to  
“ cross. For a time much anxiety was felt, especially in  
“ Matabeleland, lest rinderpest should reach and cross the  
“ border in spite of all efforts, as it did in the former outbreak  
“ of 1896. But improved methods of dealing with the disease  
“ were used, with the result that it has been held in check  
“ even under the very unfavourable circumstances of a state  
“ of war.”

**His neglect  
in the case  
of Redwater.**

This should prove that Rhodesia is by no means so irretrievably soaked with disease as has been alleged ; and I have not the slightest doubt but that, if similar precautions had been taken on the eastern frontier of Mashonaland, when Redwater first appeared, the veld of Rhodesia today would have had its droves of cattle in perfect health and condition. Mr. Orpen acknowledges that his improved precautionary measures even though carried out “ under very unfavourable circumstances ” effectually checked the spread of Rinderpest.

**Lung-sick-  
ness.**

With regard to the Lung-sickness, which caused further distress later, Mr. Gray (Veterinary Officer of Rhodesia) in his *Report* to the BRITISH SOUTH AFRICA COMPANY, 1900-1902, says :—

<sup>(1)</sup> *B.S.A. Company Report, 1900-1902.*

## RHODESIA

"The animals responsible for the dissemination of lung-sickness were mainly loot-cattle purchased at Mafeking and drawn from various parts of the Transvaal where this disease was peculiarly rife, military movements preventing anything like a systematic attempt to stamp it out. The mortality resulting from lung-sickness has been considerable."

Here again under stringent regulations efficiently administered, cattle suffering from lung-sickness could have been detected and isolated, and infection prevented: but where carelessness characterises officials, (especially stock-inspectors) who know rather less of the disease than the cattle which they inspect, such measures become impossible. It is an injustice to a man like Mr. Gray that, in the onerous position which he holds, he should not be supported and assisted by men of competent knowledge and practical common-sense. Incidentally also it is a criminal injustice to Rhodesia.

**Injustice to  
Mr. Gray.**

**And to  
Rhodesia.**

**An opinion.**

A great deal too much time was wasted in propounding theories concerning the name and character of the disease then known as "Redwater." The case demanded instant action. The facts were known to everyone that the disease (whatever its name might be) was contagious: that it was of a most virulent and deadly nature; and that all cattle, which came in contact with infected cattle, never failed to contract it. An effective "cordon" drawn round infected areas would have confined the disease to those areas. The value of isolation was proved by Dr. Koch,<sup>(1)</sup> who had cattle placed in the experimental yard at Bulawayo, railed off by a fence, and kept only four yards away from the infected cattle. The former remained immune; while the latter were dying all round them. But the efficacy of isolation is indisputable. There are numerous examples in Rhodesia. The Essexvale

**Isolation  
the Panacea.**

(1) Dr. Koch's *2nd Report on African Coast Fever*, page 1.

## SOUTH AFRICA

cattle, which were fenced in, are free from disease. And several other cases might be cited, where the foresight and private enterprize of owners did (for their own cattle) what public officials ought to have done (for the cattle of Rhodesia).

I must state my conviction that it is the serious business of those, who wish to see Rhodesia advance to her right place in the front rank of South African Colonies, profoundly to consider what is best for the country's welfare. Better to sacrifice one man, or one hundred men,—than to immolate Rhodesia herself upon the altar of official inefficiency.

**Mr. Orpen.**

In order that I may not be unfair to Mr. Orpen, I repeat that the Agricultural Department, at the time of my investigations, was but a branch (which he had created) of the Lands Department (over which he presided). He was not, and did not claim to be, a professional veterinarian. His position was simply that of Surveyor-General, with the experience of a colonial farmer and a considerable amount of unprofessional knowledge of scientific and veterinary matters. Further, he received no extra remuneration while acting as Chief of the new Agricultural Department. I give him full credit for the active and admirable methods which he adopted with signal success in the case of the Rinderpest ; and I firmly believe that similar methods were imperatively necessary in the later case of Red-water.

**Directors  
visit  
Rhodesia.**

In 1902, Earl Grey, Mr. Alfred Beit, and Dr. Jameson, as Directors of the BRITISH SOUTH AFRICA COMPANY, Mr. J. F. Jones, Joint-Manager, visited Rhodesia. It is not improbable that the question, of severing the Agricultural from the Lands Department, was considered then ; and that the wise course (since adopted), of establishing a live Agricultural Department with a practical man at its head, was determined-upon. But, when I was in Rhodesia, the thing was not yet an



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accomplished fact. I had the pleasure, however, of meeting the present Head of the Agricultural Department of Rhodesia, and of discussing agricultural and pastoral prospects with him. Mr. Ross Townsend is a thoroughly practical farmer. He has been through the mill. He is extremely keen, and well-informed on all matters connected with the land and the business of his Department. While I have been writing on South Africa, I myself have been in frequent communication with him; and the responses returned to my various interrogations indicate, in my opinion, that British South Africa possesses a capable and valuable official in Mr. Ross Townsend. I think that he should have a free-hand for carrying-out his ideas for the benefit of Rhodesia. One thing, which he already has done, merits high encomiums. I allude to the establishment of the *Rhodesian Agricultural Journal*, a very useful and interesting magazine under the editorship of Mr. Sawyer.

**Mr. Ross  
Townsend.**

**Mr. Sawyer.**

But the country has suffered in other ways besides this matter of unchecked or tinkered-with cattle-plagues. Many desiring and desirable settlers have visited Rhodesia with the intention of prospecting for farms. They have gone as far as Bulawayo. A little while later they have returned, bitterly complaining of the scanty information which they have been able to obtain, and the manner in which they have been exploited. This kind of treatment has caused them to shake off the dust from their feet at Rhodesia; and to go away utterly disgusted. I will cite the case of a Mr. Robinson. He was an Australian with a capital of about £3,000. He came to Rhodesia after the Peace of 1902, to look for a farm. Interrogated as to whether it was with the country itself, or with the way in which he and his friends had been received, that he was disappointed, he responded:—

**Scanty  
information  
vouchsafed  
to intending  
settlers.**

**Concerning  
Mr. Robin-  
son.**

## SOUTH AFRICA

" Believe me that the country is one of the finest grazing countries in South Africa. I am in love with it. But, to get any information about farms which are available is an impossibility. I have been in the country ten days ; and I could find no official in Bulawayo able to tell me anything about farms or terms. At the Club, I met a man who told me of a good block of land, suitable for pasturage, on the Buli or Shangani River. I and my friend determined to go out to see it. After some trouble we managed to get a turn-out, for which a charge of £4 a day was made ; and we started on a wild-goose chase to find that block of land. After leaving Bulawayo, it was simply like an ocean of land and rocks and forests. To locate a farm in such a place where there was no fence nor road nor any one to give information, was just as easy as finding a needle in a haystack. So we returned to Bulawayo, where some good friend advised us to go to Salisbury ; but better counsel prevailed, for we heard on good authority that we should get less information there than at Bulawayo. And here we are, having spent (wasted) no less than £60 since we left this place in the attempt to find a farm in Rhodesia."

Mr. Robinson added that he knew of at least twenty men who had made similar attempts, and who had met with precisely similar disappointments.

**Honour to  
whom  
honour is  
due.**

I do not wish the foregoing criticism to be taken as implying that the Administration in Rhodesia, or the BRITISH SOUTH AFRICA COMPANY in London, is heedless of the farmers' interests. Very far from that. I have written on this important subject simply for the benefit of the country ; and I should be guilty of gross dereliction of duty did I fail to drag to light any single obstacle to progress. But I frankly admit that the rôle of fault-finder is not a pleasant one ; and it is with great satisfaction that I turn to give honour where honour is due.

**The British  
South Africa  
Company.**

The BRITISH SOUTH AFRICA COMPANY has done, and is doing, a very great work indeed.

" The merits of the B.S.A. COMPANY are obvious : " (says Cresswell, in speaking of the great colonizing associations of the Empire). " They have effected a patriotic work, by means of private enterprize and the exertions of public-spirited directorates "

## RHODESIA

— and shareholders, I feel inclined to add: for I know of no other public company, like the BRITISH SOUTH AFRICA COMPANY, which has spent so much money in a concern known to be unlikely to make profitable returns for many years. But both directors and shareholders have faith in the vast possibilities of Rhodesia; and, consequently, where money is wanted it is not spared. People, who take a short view of Rhodesia, do not know or have not realized Her possibilities. The case is one for a long view; and the reward will exceed the expectations of even the most sanguine. Hence the sacrifices, which directors and shareholders have made and still are making. Fourteen years ago, Rhodesia was a tract of barbarism inhabited by howling savages. Today, She has 2,000 miles of railway, fine cities, and public buildings, a legislative assembly, courts of justice, churches, hospitals, schools, museums, libraries, telegraphs, telephones, and all the appurtenances of civilization. It is pure fatuity to attempt to measure the progress of Rhodesia by that of other colonies now in their adolescence. Comparison shews that, even in Her Infancy, She has outpaced them all. The Transvaal with its rich gold-belt, Natal the so-called "Garden of South Africa," the Orange River Colony the so-called "Granary of South Africa," are far behind Her in railway-enterprize alone. And Her expenditure has been met by those who expected no immediate return. Further, I do not think that any other colony in the world could have had the pluck (to say nothing of the ability) to survive the reverses which have been Rhodesia's portion. I have had occasion to blame the Agricultural Department in connection with the Redwater plague. But never let it be forgotten that instantly, when it was known that an unknown disease had to be faced, the BRITISH SOUTH AFRICA COMPANY procured the services of Dr. Koch,

## SOUTH AFRICA

the world's leading bacteriologist, to make investigations on the spot. It is true that other South African Colonies undertook to defray a share of the expense : but Rhodesia's quota amounted to at least £10,000. This is not the first (nor the last) magnificently practical and successful step which the BRITISH SOUTH AFRICA COMPANY has taken. Dr. Koch was employed also in 1896 to combat Rinderpest ; and, at great cost (which the BRITISH SOUTH AFRICA COMPANY willingly paid), a certain remedy was found. Every South African farmer to-day reaps the benefit of this splendid enterprise ; and the scourge of Rinderpest is dreaded no longer, since Dr. Koch's method of inoculation (then discovered) effects immunity. It is almost impossible to imagine what England would have gained, if we had discovered such a remedy at that time when Rinderpest visited our country every few years, slaying millions of the cattle upon our thousand hills. Of course "prevention is better than cure." I readily admit that the English method, of prohibiting importation, is the safest method of prevention : but it must be repeated that the area of England is ten times less than that of South Africa, where fences, or farmers in a position to fence their farms, are few and far between. Many years elapsed before we, with all our natural advantages, were able to eradicate cattle-plagues : but, owing to the prompt action and initiative of the BRITISH SOUTH AFRICA COMPANY, the Rinderpest of South Africa was got under control in a comparatively short period. When reviewing the acts of the BRITISH SOUTH AFRICA COMPANY, it is necessary to consider that it is not an independent government with unlimited credit or unlimited power of taxation. And I am quite sure that, if Rhodesia had been founded as a Crown Colony, She would have had (at the present period of Her existence) but few, if any, miles of railway ; and that those few miles, if erected by government-

## RHODESIA

officials, would have been of far inferior construction to, at double the cost of, the present system. Finally I am convinced that the Colonial Office under a Conservative régime, or a Liberal régime, never could or would take the same broad and intelligent interest, in the development and welfare of Rhodesia, as the directors and shareholders of the BRITISH SOUTH AFRICA COMPANY.

During my travels in South Africa, I came in contact with most of the government officials of the various colonies. Among these I ought to distinguish Sir William Milton, the head of the administration in Rhodesia, as a cautious and able statesman held in high esteem by all Rhodesians, who at all times is ready to assist legitimate industry. As far as mining is concerned, Sir William has been aided by able and capable officials; and, now that the Agricultural Department is no longer a branch of the Lands Department, due attention indubitably will be paid to the interests of husbandry.

**Sir William  
Milton.**

Since my return to England, I have had opportunities of discussing the subject with the Duke of Abercorn, the President of the BRITISH SOUTH AFRICA COMPANY, and also with the Vice-president, Earl Grey, whose only ambition seems to be the good estate of Rhodesia. Lord Gifford, Mr. Lyttelton Gell, and Mr. Maguire have done very much to shew me the real attitude of the board of directors in regard to Rhodesia; and I am cognizant also of the great interest which Mr. Alfred Beit takes in Rhodesia.

**The Presi-  
dent.**

**Earl Grey.**

**Lord Gifford.  
Mr. Lyttel-  
ton Gell.  
Mr. Maguire.**

**Mr. Alfred  
Beit.**

I therefore unhesitatingly assert that Rhodesia's position is an unusually favourable one: for no Crown Colony in the world could get government officials, paid by the Crown, to act as sagaciously and whole-heartedly as do the directors of the BRITISH SOUTH AFRICA COMPANY towards Rhodesia. The reason is no secret — they unfeignedly believe in her latent potentialities;

## SOUTH AFRICA

and proceed to develop the same to the utmost of their power.

### XII

**A magnificent foundation.**

**The Company's liberality.**

**Present method tends to pauperise.**

**The real Rhodesians.**

From a pastoral point of view, it may be said that the Colossus of South Africa laid a magnificent foundation. But, at present, there is a want of confidence in the country, not only among new comers but also among old settlers. The latter have been hard hit : the former are being hard hit ; and they do not enjoy it. Still, it must be admitted that the COMPANY has been very liberal in many ways to settlers on the land : but, unfortunately, those ways have not been the most judicious or the most permanently beneficent ways. Grants of cattle, implements, etc., have been made from time to time. There was a tendency formerly to depend on the late Cecil Rhodes. Now the tendency is to depend upon the COMPANY ; and all its generosity merely makes men lean upon it, much to their own detriment. For the habitual leaner is a parasite. Circumlocution aside, the present method tends to pauperise the farmers ; and, when assistance no longer is forthcoming, complaints about the officials and the CHARTERED COMPANY become the order of the day. There are many men in every part of the country whom it is impossible to help. They seem to harbour the germs of failure all their lives. On the other hand, one cannot fail to note the many cheery hearty old public-schoolboys of England scattered about Rhodesia, engaging in every kind of occupation, ever sanguine of success. A rough-looking giant, in a pair of breeches and gaiters and a loose shirt with the sleeves rolled-up, comes to greet the newcomer. His first words tell

## RHODESIA

you that one is nearer England in Rhodesia than in any other part of Africa. Hospitality to guests is as truly sacred and binding a duty in Rhodesia as it was in the Ithaka of Odysseys. But Professor Bryce has delineated the characteristics of the Rhodesians of today in words which are nobler and more true than mine can be; and I will give place to him. He says :—

**Professor Bryce on Rhodesian character.**

“ There is a glimpse of personality developing itself under simple yet severe conditions, fitting to bring out the real power of the man. After half an hour's talk, you part as though you were parting with an old friend yet knowing that roof is not likely ever to cover both of you again. There are, of course, rough and ill-omened explorers and settlers in South Africa as in other new countries; but, having wandered a good deal in different countries on the outer edge of civilisation, I was struck with the large proportion of well-mannered and well-educated men whom one came across in this tropical wilderness.”

These, and other salient and incomparable features of Rhodesia,—her stimulating climate, rich pasturage, extensive mineral area, political security, the hearty welcome which the settlers do extend (and which let us hope, the Government will extend in future) to all newcomers,—augur well for the prosperity of the country. She should become indeed, in no long time, like unto the Rhodes of old “ the mother of lovely children.” <sup>(1)</sup> The philosophic observer, who is devoid of predilection for the other colonies, must hold that Rhodesia is an immense political and economic gain to King Edward's Empire. She holds out, today, in her illimitable natural resources, inducements which will attract, not pauper colonists but, colonists of that grand type which England, alone among the nations of the earth, has produced in the past, and will produce in the future to be the credit and the glory of South Africa.

**Conclusion.**

<sup>(1)</sup> Meleagros of Gadara. To *Andragathos*, xii. 52.





## Political Aspects of Land Settlement

**W**HEN the end and object of the Great Boer War began to appear likely of achievement, the minds of politicians became exercised by a vitally important problem. The necessity was urged of establishing men of English origin and Imperial sentiment in the rural districts of the late Boer republics. The idea was that such establishment would render impossible a recrudescence of those dissensions and disorders which marked the closing years of the nineteenth century. It was thought that the creation of a considerable class of loyal subjects of the King's Majesty would produce the conditions which are indispensable for the future prosperity of South Africa. Two proposed solutions of the problem merit note.

**A vitally important problem.**

The first contemplated the settlement of soldiers, (veterans as well as active members of the service), on the soil of South Africa. This scheme strongly recommended itself to Mr. Arnold Forster, M.P., who took the trouble of making investigations on the spot in the capacity of a Royal Commissioner. But, after careful and elaborate enquiry, in which he was assisted by the wide experience of an able colonial farmer, Mr. Southey, he reached the doubly significant conclusion that the land was not suitable to the soldier, and that the soldier was unwilling to remain on the land. The

**A proposed solution.**

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*Report of Mr. Arnold Forster's Commission* is a forcible and intelligent document meriting the attention of all who are interested in the question of South African colonization.

**Another :  
by means of  
Land-settle-  
ments.**

The second scheme involved the establishment of Land-settlement Boards in the Transvaal and Orange River Colony. The methods, by which these Boards attempted to perform their functions, were as follows. They purchased farms and blocks of land in all parts of the two new colonies. Having done this, they imagined that it would be easy to obtain suitable settlers. The notion was that these English settlers, when once planted on the land, would act as leaven on the Boer mass, galvanizing our late opponents with English ideas, teaching a new system of farming on English lines to eager and willing learners, and (by such means) working a complete change, both in the face of the country and in the minds of its old inhabitants, as by the wave of a magic wand. That is what was expected.

**Land-settle-  
ment aug-  
ments land-  
values.**

**An example.**

What really happened was the unexpected. As soon as it became known that the Government was a buyer in the land-market, the price of every kind of land became bloated beyond belief. A single instance provides matter for profound cogitation. The Transvaal Government purchased, for £5,000, a farm situate fifty miles N.E. of the railway-terminus at Pietersburg. The said Government placed a settler on this farm, who (under the Governmental terms of settlement) has to pay  $4\frac{1}{2}$  % on the hire-purchase system for thirty years. This annual charge of £225-£250 does not seem to afford much prospect of prosperity to this particular settler. And it is not unimportant to remember that any number of similar farms in the same locality can be rented at £15-£30 a year.

**The source  
of experience.**

It is difficult to conceive of any valid grounds for the Land-settlement Boards' illusion that Land-settlement

## POLITICAL ASPECTS

inevitably must be successful on any terms. But, though the political object has not been accomplished, a very valuable object-lesson has been given. "Truth emerges more quickly from Error than from Confusion,"<sup>(1)</sup> says Lord Bacon. We learn much from the wisdom of our antecessors : but we learn more from their frantic struggles in pursuit of truth. The most practical (and assuredly the most attractive) examples always seem to be derived from previous failures, from the inevitable blunders of pioneers, from the extravagances of human nature in unwonted circumstances.

Things being as they are, it is only natural to look round for a victim upon whom to cast blame. There is a disposition, in some quarters, to vituperate Lord Milner for the miscarriage of land-settlement schemes. In my opinion, this is adding injustice to error. It is true that Lord Milner is responsible for the administration of South Africa : but South Africa contains five huge colonies, each with its own government ; and Land-settlement is only one of many matters which engage His Excellency's attention. It is a sheer impossibility, even for so capable a High Commissioner as Lord Milner, himself to treat all the details and all the multifarious minutiae of every department of administration. He is compelled, by the mere fact of natural dimensions, to depend largely (if not entirely) upon others for the information upon which his acts are based ; and, by the same token, he is obliged to entrust to others the task of giving effect to his decrees. If the data of experiments be erroneous only an inaccurate result can be obtained. If the premisses be false, the conclusion must partake of a similar disability. Lord Milner could have known nothing (for example) of the farms which the Land-settlement Boards were buying : or of the fabulous prices which were being

**The High  
Commis-  
sioner.**

**His Limita-  
tions.**

(1) Veritas ex errore emergit citius quam ex confusione.

## SOUTH AFRICA

### **Delegated authority.**

paid. He undoubtedly has done his part in appointing the best possible men whom he could get for the carrying-out of the Land-settlement (and other) schemes. It was not possible to get really qualified men for every post : yet, in most cases, His Excellency's selection of officials has been justified by results ; and perhaps the Land-department is the only section of administration in which the employment of unqualified officials is to be regretted. I myself, on several occasions discussed the problem of Land-settlement with Lord Milner ; and I found both his knowledge and grasp of detail, and the practical nature of his method of action, to be quite surprising. I am convinced that, if His Excellency had had time and opportunity to carry out his ideas in person, Land-settlement in the new colonies would have been probably more successful. But the circumstances of the case have compelled the High Commissioner to delegate his authority to various officials ; and these, in turn, have appointed minor functionaries, many of whom are incompetent ; and, (if it be necessary to blame persons instead of things), I am inclined to think that it is to these last that the débâcle of Transvaal Land-settlement is due.

### **Minor function- aries.**

### **Futility of scapegoats.**

The task, of finding an expiatory scapegoat, is indeed a perplexing one. I myself have no hesitation in consigning it to the category of impossibilities. For the reasons given above, I deem it unfair to blame the High Commissioner. I also deem it unfair to load the Land-settlement Boards with all the blame : simply because the Press, the Public, and the stress of circumstances (over which the Boards had no control) were equally delinquent — if “ delinquent ” be the apt word for use in this connection. The settlers (the majority of them, at any rate,) forced themselves upon the Government at the termination of hostilities. The press of the country incontinently clamoured for the instant establishment of settlements on behalf of ex-

## POLITICAL ASPECTS

irregulars and others. Very glorious things were spoken, with (what Kipling calls) "unimpeachable inaccuracy." Many of the would-be settlers actually were induced to expect free gifts of land and stock on presentation of visiting card. And so every sort of man became persuaded to bombard the Boards with applications. The bonafide settler did not find the governmental terms at all satisfactory. The other kind of settler deigned to enjoy free rations and an easy life for a period: but, when he waxed fat, he kicked, developing a talent for grumbling which amounted to positive genius, and eventuating as a thorn in the flesh of the Government. Therefore, I say that I think it futile, as well as undesirable to waste time in casting about for a culprit. We only have ourselves to blame; and you cannot make a victim of a crowd. To take practical measures for remedying past errors, is the course which commends itself to me.

Land-settlement, as at present practised, rests upon radical misunderstanding of facts. It has been prophesied that, if a settlement were to be established in every district of the conquered territory, English settlers would imbue the Boers with English habits, ideas, systems, politics; and that our quondam enemy would prove as plastic as wax to the moulding influence of a handful of heterogeneous Englishmen randomly scattered among them. It has been prophesied that crops (of every description) would grow so abundantly as to encourage the settlement of Englishmen on the land; and that, when once this predicted phenomenal fecundity should have been demonstrated, the country would become crowded with men of Imperial sentiments, reducing the Boers to a position of emphatic insignificance.

I always think it rather inept to argue with prophets; and I merely reserve the privilege of neglecting them.

**Some  
prophesies.**

**Ineptitude  
of arguing  
with  
prophets.**

## SOUTH AFRICA

Two points in their vaticinations, however, perhaps deserve a passing note :—

- (a) I distinctly disbelieve in the capability of South African soil for producing such abnormal crops as have been predicted :
- (b) I see no likelihood whatever of the Boers being prevailed-on to depart from their inmarcescible customs, traditions, or politics, by the influence of a few miscellaneously distributed English settlers.

To the  
address of  
some politi-  
cians.

I have discussed the first of these two questions in the chapter on *Agriculture*, and elsewhere. The second question seems to me to touch the root of the whole matter ; and I will venture to submit a few remarks addressed to those saner and more perspicacious politicians who wish to create a majority of loyal English settlers, not indeed in the Transvaal and Orange River Colony but, in South Africa. For this is what must be done, if England is to keep Her hold of the country. It can be done, if England desires to do it, and if She will approach the task in a comprehensive and statesmanlike manner.

An analogy.

When a forester is about to plant young trees, he first selects his ground and the particular species of tree which is pertinent thereto. He takes great care not to set his saplings in any soil where the roots or branches of older trees will overshadow them, or impede their straight growth and regular development.

Concerning  
Boers.

Whatever be their other vices or virtues, the Boers have proved themselves to be a determined and a cunning race. These two characteristics are so ingrained that we do unwisely to ignore them. Faddists, who fondly imagined such a vain thing as that a sprinkling of English settlers, dotted here and there, would suffice to transform the weirdly conservative denizens of the South African veld into the immaculate beau-ideal of modernity incidentally loyal to the English Crown, can

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have possessed but little knowledge of human nature in general and of Boer nature in particular. Let it be supposed (merely for the purpose of the argument) that England has been conquered by and annexed to (shall we say ?) Germany. Let it be supposed (just for the moment) that Kaiser Wilhelm's government systematically is settling German emigrants here and there among us, with the avowed intention of supplanting us, or of transforming our English Jacks and Lizzies into German Fritzs and Gretchens. The law of the land would prevent us from shooting our intended supplanters and transformers on sight : but I doubt whether we should love them, or live even on terms of amicity with them ; and I am perfectly certain that no sane person would expect us to return from a bloody war, to the ruins of our once happy homes, there to welcome our detested conquerors as neighbours and examples. Our cicatrices would be too sore. Only two courses would remain to us : for no Englishman ever would consent to assimilate himself to the Teutonic ideal. On the one hand we might persuade our German exsuperator to become an Englishman, on the other hand, we gently (but none the less firmly) might ostracize him, and make it impossible for him to live comfortably by our side, unless he would conform with our conditions. I think that we English could do these things : for Englishmen are not Slavs. But my point is that, if we English would act so in such circumstances, we shall not be ill-advised if we give our own late very worthy foe, the Boer, credit for similar tenacity in regard to his national nature. For, if we say that the Boer is England's friend, we deceive ourselves and the truth is not in us. All to the contrary notwithstanding, the Boer is only England's lately-conquered enemy—so far. The Englishman and the Boer at present are mutually antipathetic ; and no good can come of blinking the fact that their senti-

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mental relations might be described almost exactly in the diatribe of Achilleys against Hektor :—

“ as there are not faithful leagues between lions and men, nor  
“ yet have wolves and lambs an according mind, but ever  
“ meditate evils each against other, so is it impossible for me  
“ and thee to contract a friendship.” <sup>(1)</sup>

**An im-  
portant  
question.**

Let it be granted, however, that we have succeeded in establishing a few hundred English settlers in the rural districts of the Transvaal and Orange River Colony, and that the Boers are not averse from our methods of procedure. What warranty have we that such settlers always will remain loyal subjects of the King's Majesty, in the event of their personal interest, and the goodwill of their neighbours, becoming more easily obtainable by another code of conduct ?

**Effect of  
environ-  
ment on  
cattle.**

In the chapter on *Live-stock*, I have supplied typical instances of the phenomenon of natural adaptation to environment : where cattle, the pure progeny of pure progenitors, literally have been forced into the mould provided by the natural circumstances of the country.

**Effect of  
environ-  
ment on  
men.**

It was not an uncommon thing for Englishmen to settle in the late Boer republics. Although the Boers jealously guarded their land, customs, and institutions, they welcomed all comers who showed a disposition to adapt themselves to existent circumstances. Some settlers of this species still survive. Others were satisfied, after a few years' experience, that South African farming was no occupation for them. The faithful remnant, who clung to the land, adopted the Boer system ; and more — they gradually and perhaps subconsciously identified themselves with the Boer character, until they are at length part and parcel of the Boer nation. The conditions of life among Boers on the veld has effected the transmutation. Contrariwise, I failed to collect evidence of a single

<sup>(1)</sup> *Ilias*, xxii. 262–5.



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Boer who had discarded his traditions in favour of ours.

In discussing the problem of land-settlement with a certain well-known Boer, an oprecht burgher of the Transvaal, I noted that he was chagrined when I expressed my humble opinion as to the inevitable miscarriage of the present system. Much to my surprise he stated his bitter disappointment. When I inquired the cause of his astounding attitude he admitted that he, and his brother-Boers, had been reckoning much upon the land-settler, knowing full well that they could mould him into their cast of thought. The newcomer was just the man with whom the Boers preferred to deal : for the old-stagers, aided by natural conditions, very soon could reduce him to the state of clay in the hands of the potter. Not so, though, was it with the miner or with the man engaged in urban industry. Him the Boers detested : because his interest, in the very nature of it, was contrary to theirs ; and consequently, their influence over him was nil. In response to further interrogations, my informant stated a case which (I am bound to say) seems to be as concise and as pregnant as possible.

**A Boer  
opinion of  
land-settle-  
ment.**

" We shall have," he said, " a representative government. If you put 10,000 settlers in the rural districts, you only will be giving us a proportionately greater number of representatives. These 10,000 settlers will be scattered about in the very places where we Boers form the large majority ; and, therefore their voting powers will be insignificant in comparison with ours. Besides, a considerable proportion of the new settlers would be certain to vote with us : because our political programme would favour those who live on the land. Now the inhabitants of the urban districts would proffer a totally different programme, a programme favourable to urban interests apart from rural interests. For example, they would want to tax farms, to remit all protective tariffs which stand in the way of cheap living in the towns, and generally to shift burdens from the citizen's shoulders on to the countryman's. Is any farmer likely to vote for such a policy as that ? I say that your new settlers will find it

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" more to their interest to support the Boer programme than  
" the townspeople's programme. Consequently, they will  
" vote Boer ; and, by degrees, they will level-down their minds  
" and habits and lives and aspirations and souls and bodies  
" to the plane of ours, until they actually become ours. Give  
" us settlers, then, in crowds ; and we will change them into  
" Boers. That is what your scheme of land-settlement  
" means to us — the literal increase of the Boer nation and  
" power ; — and, for this reason, I humbly beseech the Al-  
" mighty daily on my knees that He will prosper these Land  
" settlement schemes, which you Kharkies so blindly and so  
" arrogantly have set on foot for your own destruction."

**A plain  
duty.**

Most people will agree with me when I say that we have no velleity for such an outcome of our thoroughly well-intentioned schemes of Land-settlement. I fancy also that we do not propose to permit such things to happen. At the same time, we must admit that the proverbial "slimness" of the Boer has enabled him (in this particular) to show an amount of perspicacity which is rather disconcerting. I, for one, am firmly convinced that, if the present system be continued nothing can prevent the views (which I have just cited) from becoming historical fact. Therefore, our duty seems to be candidly and promptly to acknowledge to ourselves that we have been, and are, spending energy and money in an undesirable direction ; and assiduously and instantly to engage in other measures.

**A new  
scheme  
essential.**

A scheme should be devised, whereby we may strengthen and not weaken our position in South Africa. We must not forget that an Englishman cannot, and will not, be settled for any defined limit of time on a stereotyped chess-board-like division of land. We must remember, that it is neither the easiest nor the most effective method to plant our settlers in the heart of the Boer strongholds, where Boer influence is (and for many years will be) quite inexpugnable, and where a somewhat stringent process of conversion is certain to be used when persuasion fails.

**A United  
South Africa.**

The forester looks for a clear ground and a wholesome

## POLITICAL ASPECTS

atmosphere wherein to plant young trees. The practical colonizer will go and do likewise. A broad purview of South Africa is absolutely essential. Large communities must be established where illimitable areas are available at a price which is reasonable. We must realise our ideal of a United South Africa ; and, for this end, our safest and surest policy will be to create a potent English element, not in those two little Boer colonies but, in South Africa as a whole. Then, and only then, shall we achieve political consolidation.

There are three parts of South Africa which are convenient to this purpose.

In the Eastern Province of Cape Colony, the old English settlers hold their own. Their children are educated in English schools : they worship in English churches and chapels : the ideas, traditions, aspirations, of the Mother-country are cherished and revered. The English settler would be welcomed here : his notions of all that is English would be appreciated by his neighbours : to all intents and purposes, he would be at home. Another likely nursery for the English Oak may be found in loyal Natal, the Garden of South Africa, where English settlers always are received with open arms. But, both Natal and the Eastern Province of Cape Colony are not without their drawbacks. Good land at a fair price is very scarce indeed. The first comers have had their pick ; and the remainder is obtainable only at high prices.

There is one more vast country, which has an area greater than that of all the other colonies in conjunction, where signally valuable advantages are offered to the English settler. It is not necessary for me to describe Rhodesia again : seeing that I already have done so, at some length, in a precedent chapter. I merely indicate Her ; and invite comparison of Her quality with that of the other portions of the King's dominion

**Cape Colony:  
Eastern  
Province.**

**Natal.**

**Average  
price of  
land=25s.  
an acre.**

**Rhodesia.**

**Average  
price of  
land=2s. 1d.  
an acre.**

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of South Africa, where English settlers safely may serve the Empire, and surely may serve themselves.

**Conclusion.**

To create a preponderance of men of English origin and Imperial sentiment on the land of the Transvaal and Orange River Colony, is a somewhat fantastic and chimerical impossibility. To create such a preponderance in South Africa, is a sane and practical possibility. We, in England, are not (or at least we ought not to be) more concerned with one colony than with another. Our ideal is (or ought to be) a United South Africa. To realise that ideal, we must plant our settlers where they are most likely to thrive and to develop their English nature and principles, unchecked, unfettered, unimpeded, by alien and adverse influences. We can afford to leave the Boer to Boerdom in the comparatively small areas which he now occupies. If we wish to strengthen his power in those areas, there is no more certain way than by that species of Land-settlement which tends to augment his control of the polls, and to add to the value of his land by bringing it under irrigation at the expense of the English tax-payer. To try to oust the Boer from his accustomed haunts is a difficult and unnecessary undertaking. Better by far to leave him to Nature. If he ever becomes fit, he will survive: if he continues on the down-grade, — well, Nature has a singularly short and sharp way with the degenerate: “wiping him, as a man wipeth a dish, wiping it and turning it upside-down.”

But, when once England will neglect the various bureaux of general misinformation and will view the problem (of Land-settlement in South Africa) from an Imperial standpoint, the practical course becomes obvious. We ought to strengthen the existent English communities in the Eastern Province of Cape Colony, in Natal, and especially in Rhodesia. They supported the Mother-country during the late War. The countenance of Supreme Authority, therefore, is no

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more than their just and merited due. In going through Cape Colony and Natal and (more particularly) Rhodesia, I came again and again upon home after home of the paladins who had fought and died for England. They were vacant and silent and forlorn. We have lavished millions in repatriating Boers, and in settling their country. We have not spent a stiver in replacing our own lost champions and defenders with worthy and reliable successors. Is it statesmanship? Or is it political dilettanteism? By planting new settlers in the colonies which I have designated, the Boer will become shut-up to follow his own devices. If these be honourable, he will sustain neither harm nor inconvenience. If they be evil, he will be unable to accomplish them. And, whatever his dissensions or disorders or ultimate decrepitude may be, he will be productive of no more disaster: for he never can be unmindful of the fact that, this time, he is encompassed by an innumerable multitude of Englishmen whose cause is England's.

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